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1810.

THE GREAT WORKS

OF THE GREAT WORKS



PREFACE.

IT has been a subject of just complaint, both with writers and readers, that the Memoirs of the Medical Society have been published at such distant and uncertain periods, that the interest of many of the communications has been diminished, and the value of some perhaps, from being of a temporary nature, wholly lost, before they have met the public eye. Hence the authors have frequently been induced to give them to the public through another channel, or, as has been the case in many instances, to with-

draw them altogether from publication ; a circumstance to be regretted as a loss to medical science. That this has operated as a discouragement to the transmission of papers to the Society, cannot be doubted. The Council, anxious to remove the cause of complaint, have resolved to publish, at shorter and more regular intervals than hitherto, a selection from the papers that may be laid before them, regarding less the bulk of the volume than the earliness of its appearance, upon which the value often materially depends : this, they trust, will prove not less agreeable to the writers, than beneficial to the public. It is satisfactory to add, that since this resolution was first announced, the number of communications has so

far increased, as to encourage a reasonable hope that, by a continuance of the same zeal on the part of the Members of the Society and their Correspondents, the object in view will be realized, so that, for the future, a volume may not improbably be published in each year.

This alteration in the mode and time of publishing has induced the Council to change the Title of the Work, not as implying any essential deviation from the former plan, but rather with the view of shewing that there is no necessary connexion between the present and former volumes of Memoirs, of which this may be considered as, in fact, the commencement of a new series.

Of the comparative merits of the present collection, either in relation to the former volumes of the Society, or others of a similar description, it is both unnecessary, and would be improper, to say much: this is a point which the Public must ultimately decide upon. Discoveries of great importance in Medical Science are not of every-day occurrence, nor are they perhaps to be expected. The present collection lays no claim to such. Yet it is presumed that it will not be found destitute of interest, nor deficient in useful practical information. If this be the case, the object of the Society will be accomplished.

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TRANSACTIONS
OF THE
Medical Society of London.

ART. I.

ON MEDICAL TECHNOLOGY.

By JOHN MASON GOOD, F.R.S. Sec. M.S.

THE perfection of a science depends, in no inconsiderable degree, upon the perfection of its language; and the perfection of its language upon its simplicity and precision. A writer may have clear ideas in himself, but, to communicate them to his reader, his terms must be equally clear, and possess a definite meaning. The philosophy of the middle ages was a chaos of darkness and perplexity; and such it would perhaps have descended to the present day, had not Lord Bacon, the grand luminary of the sixteenth century, given life and utility to the senseless mass, by calling men from the jargon of words to the study of

things ; and had not Locke and Condillac, in the ensuing century, set the admirable example of prefixing a determinate meaning to various equivocal words in common use, and scrupulously employing them in this single signification. *Vocabula et nomina*, says a writer to whom medicine is deeply indebted, *sunt signa idearum nostrarum, et tantum valent, quantum sonant, vel quantum, ex definitione constanti, certus est et fixus eorum significatus. Si itaque ob inconstantiam loquendi eodem nomine plures ideæ enuncientur, eo prolato, auditor quidquid significet hoc nomen non intelligit ; ideoque qui verbis æquivocis utitur, is ideo loqui videtur ut intelligi non possit. Eodem itaque nomine, unica tantum idea significari debet, si cordate loquamur**.

In our own times, every one feels the advantage which chemistry has derived from the universal adoption of the Lavoisierian nomenclature : and though natural history has not hitherto been benefited in an equal degree, it is only because its language has not been

* *Sauvages Nosol. Methodic. Prolegom. p. 26.*

equally corrected, and that its terminology still continues to a considerable extent imprecise and erroneous.

What has been done for chemistry and natural history ought long ago to have been done for medicine ; the vocabulary of which is a jumble of terms derived from almost every language, and every system, whether dead or living, founded upon no common principle, and equally destitute of precision and simplicity. We have Hebrew and Arabic terms ; Greek and Latin ; French, Italian, Spanish, German, English, and even Indian, African, and Mexican ; often barbarously and illegitimately compounded, fanciful in their origin, cacophonous in pronunciation, and, for want of a determinate signification, formed, as one would think, rather for the purpose of supplying the place of ideas than of communicating them. It is not necessary to detail the cause of this confusion : every one knows that it has for the most part arisen from those political and geographical changes that have marked the history of medicine in its different epochs, in conjunction with that succession of theories

which, from the time of Hippocrates, has been perpetually unfolding to the world; almost every one of which, if characterised by nothing else, has at least taken care to mark its existence by a new coinage of words.

The sources, then, of the impurity and perplexity of medical language may be contemplated under the following heads. First, the intermixture of different tongues that have no family or dialectic union. Secondly, the want of a common principle in the origin or appropriation of terms. Thirdly, the introduction of a variety of useless synonyms, or the adoption of different words by different writers to express the same idea. Fourthly, imprecision in the use of the same terms. Fifthly, an unnecessary coinage of new terms upon a coinage of new systems.

The following pages will be found to contain some remarks upon each of these sources; and will close with a few hints for such a general correction and improvement of medical language as may yet be introduced into it without violence or ostentation.

I. Every one knows that the languages

chiefly made use of in the nomenclature of our most celebrated nosologists are the Greek and Latin; and it would have been well if these tongues had formed the limit of their vocabularies, for unquestionably they contain a mint sufficiently large for every purpose. Even here, however, we occasionally meet with words illegitimately compounded, as *mentagra*, *judendagra*, *nostalgia**, *tonsillitis*. But who is there that can endure, in the midst of a Greek and Latin vocabulary, the introduction of such barbarous words as *cramphust*†, *soda*‡, and *scorbutus*§, from the German; *petechia* and *scarlatina* from the Italian; *modorra*, *modor-*

* I allude to the concurrent derivation of most of the dictionaries, which successively trace *nostalgia*, from *nostras* (*our own country*), and *αλγος* *grief*: though I have no doubt that Sauvages is correct in referring it, as a legitimate term, to *νοστειν*, “*to return*,” and *αλγος* or *αλγεια* as above. *Nostras*, indeed, should form *nostralgia*, and not *nostalgia*.

† *Der krampf*: whence our English *cramp*.

‡ *Das sod* or *sodt*; still used colloquially for both heart-burn and water-brash: *ich bin mit dem sod geplagt*. “I am troubled with the water-brash.” The same term in chemistry is derived from the same source.

§ *Der scorbut. der scharbock*, perhaps more properly *die schorf-pocke*. The direct origin is not exactly known.

rilla, and *patursa* from the Spanish; *bicho* and *bichios* from the Portuguese; *nucha**, *tofust*†, *essera*‡, *subeth*§ or *subeta*, and a variety of

* Probably نوک “the point or head of a thing;” the region of the atlas or uppermost of the cervical vertebræ. Dr. Turton states it to be derived from an Arabic term which he writes in Hebrew characters נקרה, and which he translates *cavity*, as though “the cavity between the shoulders.” But I know of no such word in Arabic.

† In Arabic تف “a mark,” “weal,” or “prominence on the body.”

‡ I do not profess to understand very exactly what disease Sauvages intends by this term: but it is generally supposed to be a species of *urticaria*. The Arabic اسارا, from its radical meaning, should rather induce us to suppose it a species of erysipelas or *zona ignea*. اسير signifies *to subdue*, and the substantive in its plural اساري imports *captives*, or slaves bound round with chains: whence اسارا انار would be literally *zona ignea*. Hence the expression, سلسله اسار و قيد حصار ايله کر فتار اولد بلر. If the root be اسر, the difference will not be essential: this meaning “to bind, or bridle.”

§ This is the term of Avicenna (سبات), and has the precise sense of *coma* in Greek: to which Avicenna sometimes adds اسرم, to express stertorous sleep.

others from the Arabians; *beriberi** from India; *mordexia* from China; *galiancon*, *fram-bæsia*, *nambakassa*, from

“Guinea, Guiana, or—the Lord knows where?”

These, however, form but a small sample of the gibberish that at present constitutes the medical vocabulary: they are purposely confined to the branch of nosology; and, amongst the writers upon this subject, to those who still possess, and very deservedly so, a high degree of celebrity; for I have not chosen to wander beyond the writings of Sauvages, Lin-néus, Vogel, Sagar, Cullen, and Darwin.

Had these terms, indeed, been altogether arbitrary, and had an arbitrary origin been the principle of our nomenclature, there would

* Beriberi is unquestionably an Indian term, duplicated, or in the superlative degree, to denote a *violent* attack of whatever the radical term is intended to express, of which we do not seem to be altogether certain; for while Sauvages and others regard it as a species of *contractura*, Lord Valentia assures us that at Columbo “it is a dropsy peculiar to the island of Ceylon that frequently destroys in a few days.” *Voyages and Travels*, Vol. I. p. 318. From the term being common to the Ceylonese as well as to the Hindus, it is probably of Sanscrit origin.

perhaps have been no great objection to the generality of them. Many of them are sufficiently euphonous, and each could, in such case, have excited only a single idea: but as this is not the fact, the classical student can never commit them to memory without disgust at so barbarous an association, nor the unclassical student without having a secret and commendable thirst to become acquainted with their radical meaning; which he can only thoroughly accomplish by sacrificing his time to a knowledge of the different languages from which they are severally deduced.

II. Yet there is a more serious evil in the want of a common principle to which medical technology can appeal, than in the want of a common language. And it is curious, and in some degree amusing, to trace the multiplicity of accidents or fancies (for it is seldom that they are referable to a graver source) to which we stand indebted for the greater number of our terms in common use.

Sometimes the nomenclator appears to have been smitten with the love of *colour*; and, in consequence, we have black, white, green, red,

scarlet, yellow, and purple diseases; under the names of *melæna*, *melas*, *atrabilis*; *leuce*, *alphos*, *albugo*, *albaras*; *chlorosis*; *rosa*, *rubédo*, *rubéola*; *scarlatina*; *icteritia*, *aurigo*; and *purpura* or *porphyra*.

Occasionally the order of *time* seems to have been the principle of designation; and hence we have ephemeral and quotidian; continent and intermittent; tertian and quartan; or, in the more approved terms of our nosologists, amphemerine, tritœophyte, and tetrartophyte fevers: we have monthly fluxes, spring-rashes, and summer-heats. The nosological arrangements of Aretæus and of Cælius Aurelianus are founded upon this principle; and hence the distinction of diseases into *chronic* and *acute*.

In various cases *natural history* appears to have supplied the principle; and the nomenclator has wandered equally among birds, beasts, and fishes, for peculiarities and distinctive habits. From this quarter we derive the elegant terms of *fames canina*, *rabies canina* (dog-hunger, dog-madness); *cynanche**

* *Cynanche* (*κυνανχη*) appears to have been at first a mere mistake for *synanche* (*συνανχη*), from similarity of sound. The

(dog-choak); *boulimia* or *bullimia* (ox-maw); *puca* (magpie-longing); *hiphus* and *hiphophyon* (horse-twinkle and horse-blotch); *elephantiasis* (elephant-skin); *scrophula* (swine-evil); *viti-ligo** (calf-skin); *ichthyosis* (fish-skin); *tan-*

elegant mind of Celsus attempted to banish the former term, and to restore the true reading: whence, in his chapter *de Angina*, he observes, “nostri anginam vocant: apud Græcos nomen, prout species est. Interdum enim neque rubor neque tumor ullus apparet: sed corpus aridum est, vix spiritus trahitur, membra solvuntur; id *συναγχην* vocant. Interdum lingua faucesque cum rubore intumescunt, vox nihil significat, oculi vertuntur, facies pallet, singultusque est: ὡς *συναγχη* vocatur. Illis communia sunt; æger non cibum devorare, non potionem potest; spiritus ejus intercluditur. Lævius est, ubi tumor tantummodo et rubor est, cætera non sequuntur: id *παρασυναγχην* appellant.” Still, however, the popular blunder continued: so that Galen was obliged to regard *synanche* and *cynanche* as synonyms, or nearly so; throwing out a hint that one of the two species of which he treats (for he omits the *parasyanche* of Celsus) might be called by the one name, and the other by the other. Sive *synanchen* dicere volueris sive *cynanchen* vel alterum quidem horum *synanchen*, alterum vero *cynanchen*, sive utrunque *synanchen* vocaveris, duas *synanches* sciveris esse rationes. Tom. VI. 324. Aetius afterwards attempted to justify *cynanche*, from the patient’s thrusting out his tongue like a dog: but Cælius Aurelianus and Paulus used *synanche* after Celsus.

* I have translated this term as above upon the authority of the grammarians and medical lexicographers, who generally

tarismus (tarantula-bite); *vampirismus* (vampire or bat-bewitchment), a term best understood by our own vulgar synonym *blue-devils*: and *urticaria* or nettle-rash*.

Sometimes the names of *persons* or of *places* have been resorted to as a foundation for entitling diseases: and from this source we derive *facies Hippocratica*; *lepra Arabum*, and *lepra Græcorum*; *plica Polonica*; *sudor Anglicus*; mor-

concur in deriving it from *vitulus*, a *calf*, on account of the whiteness of the calf's skin, this disease being, as they suppose, confined to the *alphos* or white morpew; whence it is often erroneously written *vituligo*. That Festus should have led the way to this mistake I am not surprised at; but that Dr. Turton in his Glossary, and Dr. Parr in his New Medical Dictionary, should have copied the mistake, surprises me not a little: for Celsus, who gives an admirable summary of this disease, expressly tells us that it consists of three species, *αλφος*, *μελας*, and *λευκη*, of which the second exhibits a *black* instead of a *white* colour, whence indeed its name: "*μελας*," says he, "*colore ab hoc (scilicet αλφο) differt, quia niger est, et umbræ similis.*" There can be no doubt that the proper theme of *vitiligo* is *vitio*, "to vitiate, corrupt, or render morbid."

* This disease is denominated by the Arabians with true oriental elegance of language *بنات الليل* "daughters of the night." The *اسارا* (*essera*) appears to have been a species of the same genus.

bus Gallicus, *Hungaricus*, *Garhamensium*, &c. *ignis sancti Antonii*, and perhaps *Sardiasis**. In anatomy this absurdity exists to a still greater extent; and has produced several attempts at a reformation both in our own country and on the continent, though, I am sorry to add, hitherto without any success. In our own country the plan proposed by Dr. Barclay is well entitled to attention; and in France the exertions of Dumas, Chaussier, and especially of the indefatigable and much to be lamented Viq-d'Azyr, are too well known to render a detail of them necessary, were it even consistent with the object of this paper. In the brain alone we meet with an assemblage of

* The Arabians have imitated this mode of nomenclature in various instances. It may be sufficient to specify the two following, because they have been copied into our existing nomenclatures: *نار پارسى* Ignis Persicus, a species of anthrax: and *بيرقا مدينى* or rather *البيرقا مدينى* literally *vermis medinensis*; but which has more generally been rendered *vena medinensis*. These are both terms of Avicenna: and in quoting him I refer uniformly to the very elegant edition of his works in the possession of the Medical Society. Rom. 1593, folio.

terms so ridiculously diversified in their sources, as frequently to overpower the gravity of the face upon running them over; and at the same time so obscene in many of their references, as to render it impossible to read them except in a dead language.

III. Yet our language is not only not founded upon any common basis, but perplexed by the introduction of synonyms or equivalent terms derived from different languages, in consequence of an almost total want of agreement upon this subject between our best and most approved writers. A few examples will best explain my meaning.

The more common terms among the Greek physicians for a morbid excess of appetite are *boulimiasis*, *cynorexia*, and *lycorexis*; among the Latins, who have merely translated these terms, *fames bovina*, *canina*, and *lupina*: Avicenna uses *bolismos*, and many writers *bulimia*; while others, dissatisfied with the gross idea conveyed by all terms of this kind, have racked their invention for substitutes, and inundated us with their results. Hence Plutarch tells us that the term common in his day was

phalulimos ; while Cælius Aurelianus employed *phagedæna*, several *addephagia*, and a few *esurigo*. Among the Arabians it is denominated *يرقود* (*jerkud*).

In like manner *depraved appetite*, or *longing*, is sometimes indiscriminately denominated *citta*, *cissa*, and *allotriophagia*, from the Greek ; *pica* and *malacia* from the Latin.

Varicella is a very good name for chicken-pox ; but after having learnt to recognise it by this name, the student has also to follow it through many of our nosologists, and through all our medical lexicons, under the name of *variola lymphatica*, as though it were not a distinct genus of disease, but a mere species of small-pox. He has also to follow both these diseases through a wrong etymology in all the writers : each having copied from the others, down to the present hour, in deriving *varicella* from *variola*, and *variola* from the Latin term *varius* ; and for this admirable and most satisfactory reason, as they all concur in telling us, *quia variat corpus* ! “ because it alters the body !” Neither is *variola*, however, derived from *varius*, nor is *varicella* from *variola* ;

nor are either of them derived directly from the Latin. They are both Spanish diminutives, first employed, if I mistake not, by the translators of Haly Abbas at Cordova; the former derived, not from *varius* “changeable,” but from *varus* “a pock” or “pimple;” a word still in existence in several of our nosologies, and in old Spanish *vario*, whence the Spanish diminutive *variola**, since changed in its ac-

* It is probably on this account, for I can conceive no other, that Sauvages calls it a barbarous term, and unites it with *patursa* amongst those which ought to be rejected: *variola et patursa*, says he, *ut barbara, ableganda*. He is speaking, indeed, of variola, in this place, as applied to *syphilis*, and objecting to the misapplication: but this alone could never have induced him to apply the epithet *barbara* to the term itself.

It is generally asserted that the Arabic term for small-pox is *chaspe*: but this is a mistake. *Chaspe* is used by Rhazes and other Arabian writers to indicate this disease: but the word itself is Syriac (ܟܫܦܐ) (ܟܫܦܐ), and, like the same term in Chaldee (ܟܫܦܐ), means directly *erubescence*: that flush of red which is often diffused over the cheeks of the modest or the bashful, as indeed the Chaldee root imports in its primary sense (ܟܫܦܐ) *pudore suffundi*: whence in the conjugation aphel ܟܫܦܐ *pudofacere, pudore suffundere, confundere*. In Hebrew the same term is employed, and to import the same effect, but by a different means: for in this last

cent to variola, and literally *little* or *small-flock*. While *varicella*, instead of being derived from *varus* or *varius*, has its root in *varix* (also retained in modern medicine to signify superficial prominences), and which in Spanish is *variz*, and, when employed with a

language כסף implies “to grow pale or wan,” from *shame*; and is rather therefore *ignominiâ affici*, than *pudore affici*. *Chaspe* in Arabic, instead of small-pox, means (at least in the form of كسپه) a kind of porridge eaten by the poor.

Among the Arabian writers we meet with a variety of Syriac terms; for many of them were not born in Arabia, but in Syria or Persia. Thus Mesue was born and educated in the former country, and Rhazes in the latter. The works of Mesue were first written in Syriac, and afterwards translated into Arabic: and it is perhaps from him that Rhazes derived the term. The Greek translator of Rhazes renders the Syriac ܟܫܦܐ by εϋλογία, which by many has been supposed to be a mistake for εϋφλογία, i. e. as Machelli has given it in Latin, *incendium*. The direct medical meaning is εξανθημα (exanthema), or, as we have it in English through the medium of the Latin, *efflorescence*. The common Arabic term for small-pox is a literal version of the Syriac *chaspe*, and hence shews very clearly the quarter from which it was derived. This term is سُرْحِيَّيْ (surchyce), from سُرْحِيَّ (surchy) *rubedo*: or perhaps the superlative form سُرْحِيَّ سُرْحِيَّ (surchy surch) *valde ruber*.

diminutive termination to signify minute prominences, *varizella* or *varicella**.

It is hardly necessary to pursue this subject farther. *Rubeola*, which is also a Spanish diminutive from *rubio*, "red," is denominated by Sydenham and Morton *morbilli*; by Sagar *febris morbillosa*; by the translators of Avicenna *variola cholericæ*; by Castellus *roseola*. So heart-burn is sometimes styled *cardialgia*, sometimes *pyrosis*, and by Linnæus, after the German writers, *soda*. *Coma vigil* is by Linacre called *marcor*; by Sauvages *typhomania*; by the Spanish writers *modorra*. For St. Vitus's dance we have *chorea*, *chorea sancti viti*, and *scelotyrbæ*, all in equal use: the last, however, a very improper term, though introduced under the authority of Galen, since we know, from Pliny, that it was also used among the Greeks to denote local scurvy. Sleep-

* From the middle of the seventh till the middle of the thirteenth century Cordova and Bagdat constituted the two principal Saracen courts, under the names of the Western and Eastern Caliphats. In both these cities medicine as well as other sciences was chiefly cultivated, and hence the introduction of Spanish as well as of Arabic terms into the medical vocabulary.

walking is, in like manner, denominated *noctambulismus*, *somnambulismus*, *hypnobasia*, and *nyctobasis*; night-mare, *incubus*, *succubus*, *ephiartes*, *prigalium*, and *epibole**: epilepsy has still a greater choice of names; and for syphilis they are almost innumerable.

IV. Yet we are not only overloaded with terms to express the same idea; but of these terms a very great number are so loose and indefinite as to convey no precise idea whatsoever, while others, on the contrary, cannot fail to excite a very erroneous one. Let us take an example from some of the names invented to denote the disease last adverted to. Fracastoro, whose muse deserves to have been better employed than in composing a very excellent and classical poem upon so disgusting a

* The Arabians have as many names for this disease as the Europeans: the chief are *يرخفج* (*jerchefeg*); *برخفج* (*berchœfic*); *برخفنج* (*berchœfenc*); *اغر بصف* or *اغر بسان* (*aghyr basmak*: or *aghyr basan*). Whence the patient himself was called *اغر بصر* (*aghar basar*) *ephiarte seu incubo laborans*.

subject, denominates it *sypphilis**, Astruc *lues*; both which names are, as to their origin, unexceptionable. But when, after Baglivi, it is denominated *morbis Gallicus* (French-pox); and after the French writers, who did not chuse

* Perhaps this name ought to have been written siphilis. The root Fracastoro appears to have had in view is *σιπαλος*, a term met with in Suidas and Eustatius, and translated *deformis, odiosam et invisam faciem habens*. Thus the etymologists *αλλα ου μεν ΣΙΠΑΛΟΣ τε και οφθαλμοισιν εφηλος*. From *σιπαλος* was formed *σιφλος* by syncope; a term met with in Lycophron: and from *σιφλος* Fracastoro seems unquestionably to have derived Syphilus, the name of the hero of the very beautiful poem I have alluded to above, and whom he describes as having brought down this disease upon himself, and the world at large, as a curse for having insulted Apollo, while he was tending the flocks of King Alcithous. The rest Fracastoro shall tell for himself:

Protinus illuvies terris ignota profanis
 Exoritur: primus, regi qui sanguine fuso
 Instituit divina, sacrasque in montibus aras,
 SIPHILUS, ostendit turpes per corpus achores.
 Insomnes primus noctes, convulsaque membra
 Sensit, et à primo traxit cognomina morbus,
 SYPHILIDEMQUE ab eo labem dixere coloni.

Jerom Fracastoro, or Hieronymus Fracastorius, a celebrated physician of the sixteenth century, was born at Padua in 1482, and died in 1553. The poem now quoted from, which is not

to accept the compliment, *lues Neapolitana*, or *lues Bavarica* (Neapolitan or Bavarian-pox), the disease is at least loosely, perhaps erroneously, characterised. The origin of this malady, however, is to this moment a secret, and there is no chance of its being otherwise. It was at first asserted to have been brought home from America by Columbus; but there is no sufficient proof that it had existed in America before its intercourse with Europe: while, although it first appeared in Europe about the time of the return of this celebrated circumnavigator (March 1493), it seems to have preceded his return by some weeks; for at the period of his reaching Seville, to join the Spanish army, in April, it had already arisen and spread itself over Auvergne, Lombardy, and various other parts of Italy; while in the course of the same summer it was ob-

very generally known, is entitled *De Syphilitide*; it is divided into three books, consisting collectively of about 1400 lines; was dedicated to Cardinal Bembo, secretary to Leo X. and was first printed, I believe, at Verona. The edition from which I have quoted is in the British Museum: it is entitled *editio tertia*: the date 1584, Venice.

served in Saxony, Brandenburg, Brunswick, and Mecklenburg, and especially at Strasburg, as all the German writers concur in admitting*; and according to Fracastoro (who was an eye-witness of the entire progress of the disease, and from his medical reputation, and residence almost on the spot of its first appearance, more largely engaged in the cure of it than any physician of his day) in different parts of Asia and Africa as well as of Europe†.

* See especially *Meiner, Sitten des Mittel Alters: Stumpf, Schweitzer Chronick*, lib. XIII.; and *Stettler, Schweitzer Chronick*, lib. VII. See also *Sprengel, Geschichte der Arzneykunde*, Aug. fol. Theil II.

† “ Nunc ad eas contagiones pertranseamus quæ extrinseca magis sentant, incipientes à *Syphilide* morbo: quippe novum et diu nostro orbe incognitum morbum inter alia admiranda, nostra tempestas vidit, qui *Europam fere omnem, Asiæ vero, atque Aphricæ partem non parvam* occupavit. In Italiam vero fere iis temporibus erupuit, quibus Galli sub rege Carolo regnum Neapolitanum occupavere, annos circiter decem ante 1500, a quibus nomen morbo inditum fuit, Gallicus appellatus. Galli vero nominis injuriam in nos retorquentes morbum Italum vocant, Hispani patursam, Germani nunc Mevium, nunc Gallicum dicunt, nonnulli vero imposito nomine pudendagram appellavere quod à pudendis inciperet, sicuti et mentagram, qui a mento inciperet; novum morbum apud an-

By Joubert this disease is called *variola magna*, and thus, not to mention the absurd-

tiquos appellatum fuisse Plinius est author: nos Syphilidem in nostris appellavimus."—De Contagiosis Morbis.

I have extracted this passage at some length, because, although the entire history of the disease, as contained in the works of Fracastoro, affords the best as well as one of the earliest accounts that have descended to us, it does not appear to have been consulted by modern writers. From the above passage it is clear that the syphilis, on its irruption, was not, at least *uniformly*, regarded as a disease altogether new; that it was supposed by the writer and others to be a mere revival of a complaint adverted to by Pliny; and that it made its appearance about the same time in Europe, Asia, and Africa. Fracastoro proceeds to state that its peculiar nature was a subject of violent warfare among medical practitioners; and that a dispute of great asperity was long maintained whether it was not brought home by Columbus, and first communicated by the crews of his ships; an opinion, however, to which he did not incline.

One of the earliest German writers who ascribed the disease to the return of Columbus from America is Leonard Schmauss, a physician of Strasburg, whose works were published in 1518; but neither his history nor his arguments are in any degree satisfactory: while his countryman Matern Berlen, a clergyman of Ruffach, and an eye-witness of the first irruption of the syphilis, speaking of it in his history of the Italian expedition of Charles VIII. is perfectly silent as to its Spanish or American origin; and declares it to have been a punishment inflicted by the Almighty on this monarch and his subjects, in consequence of his having carried off the Duchess Anne of Bre-

ity of coupling the adjective *magna* with a diminutive substantive, we have it confounded

tagne from the Emperor Maximilian, to whom she had been betrothed.

Among the Spanish writers there are two chiefly who ascribe the origin of the syphilis to an American source ; while others, by their silence upon the subject when detailing the particulars of the return of Columbus, give sufficient evidence that they disbelieved the report. Of the two who contributed to spread it, one of them, Gonçalvo Hernandez de Oviedo, affirms that it was conveyed into Italy by Cordova's fleet, which however did not arrive in Italy (Messina) till May 24, 1495, and consequently not till two years after the disease had existed there. The other is Sapelveda, who, in a history of America written in a good Latin style towards the middle of the sixteenth century, roundly asserts that " *ex Barbaricarum mulierum consuetudine Hispani morbum contraxerunt.*" But as this writer does not, like his contemporary Fracastoro, enter into the particulars of the controversy, his assertion can go no farther than to the weight of his own individual opinion in a controverted case.

Amongst those who have been most full in their accounts of the voyages of Columbus and the discovery of America, I shall certainly be allowed to reckon Antonio de Herrera. He states his return to have been at the period above specified ; he is very particular in detailing the order sent to Lisbon for Columbus to follow the Spanish court, on the moment of his arrival, to Barcelona, to which it was then removed ; the highly honourable reception the circumnavigator received ; the preparations which were immediately made for his second voyage ; - the facility with which this

with a disease pathognomonically distinct. By other writers it is denominated with equal

second voyage was fitted out; and the instructions given to him on the occasion. Yet not a hint is added that his crews were unhealthy, that the new recruits dreaded the plague to which (had he brought home the syphilis from America) they must have known they were about to be exposed, nor a single instruction to be provident of their health in this respect. Herrera's words are as follow. *Dieronle ornamentos y cosas para el culto de dios: y la reyna en particular diò uno muy rico de su capilla, mandòse al Almirante que pudiesse diligencia en su partida, y que procurasse de descubrir lo mas presto que pudiesse, si la Isla de Cuba, que avia llamado Juana era tierra firme; y que con los soldanos, y gente Castellana se huviesse con mucha prudencia, tratando benignamente à los buenos, y castigando los malos. Despidiòse de los Reyes, y aquel dia le acompañò toda la Corte de palacio à su casa, y tambien quando saliò de Barcelona.*—Hist. Gen. de las Indias Occidentales, Decad I. l. ii. c. 5.

One of the best treatises upon this subject is to be found in the Memoirs of the National Institute, entitled, “*Observations sur l'Origine de la Maladie Vénérienne, par M. Koch.*” The writer has examined with considerable accuracy most of the publications in favour of the common opinion, together with the antagonist arguments; and he inclines to a belief that the disease had an American and Spanish origin. Yet it is truly extraordinary that he never once alludes to the name of Fracastoro, nor appears to know that such an author had ever existed: in consequence of which he has by no means been fairly in possession of the whole case. Yet even without the history of Fracastoro before him, M. Koch does not ap-

incorrectness from some single symptom alone, or some single part of the body on which it happens occasionally to exert its chief violence, and hence the unclassical terms of *mentagra* and *judendagra*; the latter of which, as though to increase the confusion, stands at this moment, in the nosologies of Sagar and Linnéus, to express a merely local affection of a very different nature. From the same absurd principle the Spanish writers termed it *bubo* or *bubos*, the Neapolitans *pellarola*, *orchiarolla*, and *unghiarola*, according as the eyes or skin were chiefly affected.

Mania is universally understood to signify a particular species of madness: but *typhomania*, instead of madness, means a particular species of watchfulness, the *αγρυπνον κωμα* of the

pear to have been perfectly satisfied with his own conclusion; for he adverts to other causes as having contributed an auxiliary part, and conceives that “ la propagation subite et merueilleuse de ce mal, doit etre attribuée, soit à la circonstance de la retraite de Charles VIII. et des lansquenets de l’Italie, soit à l’etonnante dépravation des mœurs, et à l’affreux libertinage qui régnoient en Europe sur la fin du quinzieme siecle.”
—Tom IV. Morales et Politiques.

Greeks, and the *coma vigil* of the Latins ; the *سبات اسرم* (*subat asarim*) of Avicenna.

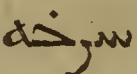
Melancholia and *atrabilis* are univocal terms, and were formerly used to express the same idea of a dejection of blood from the liver. In later periods, however, the latter alone has been employed to express this disease, the *μελαινα* of Hippocrates; while the former, as every one knows, has been imprested to represent the opposite to *mania*.

What can be more different in their commencement than the two genera of fevers denominated *synocha* and *synochus*? Yet a mere arbitrary change in the gender of one common term is all by which we have to discriminate them in the best modern nosologies.

Phagedæna, in Cælius Aurelianus, means canine appetite; in more recent books a corroding ulcer. The wind-pipe, among the Greeks, is denominated both *cricos* and *trachea*: the anatomists and surgeons, as though not knowing which of the terms to prefer, have consented to divide them; the former taking the first, and the latter the second. Hence the rings of the larynx

are denominated *cricoid* cartilages, and all the muscles attached to them are distinguished by words compounded of *crico*, as *crico-pharyngeus*, *crico-thyroideus*, &c. The surgeons, on the contrary, who confine themselves to the latter term exclusively, instead of *crico-cele* and *crico-tomy*, speak only of *tracheocele* and *tracheotomy*. The physicians have made common cause with the surgeons; and hence, instead of *cynanche cricalis*, we have *cynanche trachealis*. The one is perhaps as good a term as the other, but one alone is sufficient; and if the nosologists make their election of *trachea* as an appropriate term for the *wind-pipe*, how inappropriate, and, to the unlearned, how perplexing is *trach-oma* for a disease of the *eye-lids**!

Stómachus and *stomachicus* are terms that apply to the stomach; *stom-algia* to the tongue, and *stoma-cace* to scorbutus or scurvy. The radical term in all these is the same; and the Grecian etymologist, though

* The Arabian writers have not much improved upon the accuracy of the Europeans, for they use  for both the trachea and œsophagus.

he may disapprove of one or two of the compounds, will have no difficulty in tracing them home. But as every medical student is not a Grecian etymologist, it is impossible for him to be otherwise than bewildered in his vocabulary; more especially when he finds that *stomacace* is also employed by several writers to express St. Vitus's dance.

What is the meaning of *tone*? In therapeutics, in physiology, and in the common language of mankind, *sound and healthful elasticity*: that voluntary reaction or state of extension between antagonist muscles, as Galen has admirably observed after Hippocrates, by which they are removed from a modification of rest; and in which the one yields to the other, not from utter debility, but in a precise ratio to the superiority of power exercised over it*. Whence that class of medicines which contribute to this elasticity or healthful reaction in irritable or weakened organs is denominated *tonics*; while organs which are destitute of it are said to be in a state of *atony*. But if

* De Mot. Muscul. l. ii.

tone be used to imply health, and *tonics* restoratives of health, what are we to understand by the phrase *tonic spasm*? a phrase founded upon an erroneous physiology, perpetually, as I fear, leading us astray in our practice, and applied to a state of muscle in which there is no more *tone*, elasticity, or healthful reaction, than in the frozen strings of a violin. To shew the full force of the absurdity of this phrase, it is only necessary to translate it, and to tell the English reader that it means neither more nor less than *extensible contraction*.

Phrenitis is a common and a very proper term for phrensy or inflammation of the brain; but *paraphrenitis* is employed to express inflammation of the diaphragm. How is this last sense to be explained? The medical lexicographers tell us that the preposition *παρα* is here used as a diminutive to denote a kind of sympathetic phrensy. Yet nothing can be more superficial; and here, as in the former case, the term is derived from an erroneous physiology. *Phren* (Φρην), in *paraphrenitis*, has a reference to the very vulgar but very early opinion of the residence of the soul

in the præcordia; while *para*, instead of diminution or defect, implies proximity—*inflammation around the seat of the soul*. Yet the meaning of *παρα* is about equally divided between the ideas of proximity and defect in the medical use of the term, and hence the student can derive no precise information from its employment. Thus the *paracme* of a fever means its decline; *paracusis* depraved hearing; *paranœa* defective judgment; in all which *παρα* is used diminutively: while in *parotis*, *parathenar*, *paronychia*, it implies proximity alone. In paralysis its intention is doubtful, for it may be taken either way*. There are many other prepositions and particles which, in composition, are used in the same indeterminate manner, and considerably augment the confusion of our vocabulary.

V. The last source of imperfection and perplexity I shall take leave to notice is the coinage of new terms upon the coinage of new

* *Παραλυσις*: from *παρα* and *λυω*, *solvo*, *dissolvo*: “a state approaching to that of dissolution:” in which *παρα* is a preposition of proximity; or “imperfect dissolution,” in which it is a preposition of defect.

systems. This has been a very ample and inveterate medium of error, and one which has not only run through our nomenclature, but through our reasonings; and in consequence of its prolific influence the language of medicine is become a curious mosaic of the chief pathologies of ancient and modern times. The dogmatic, empiric, and methodic systems still contribute something; the corpuscular has added much; the humoral still more; the alchemical has kept pace with the humoral, and the geometrical has not stopt far behind. The spasmodic theory of Hoffman and Cullen is, by no means, unamenable to this censure: in effect its phraseology formed no inconsiderable source of the Brunonian opposition, and laid the first foundation of the Brunonian doctrine. Yet the followers of this last system have certainly no reason to triumph. The terms introduced by Dr. Brown are, for the most part, inappropriate in themselves, to say nothing of the looseness with which they are employed, as well in his own writings as in those of many of his warmest advocates: while in the more elegant display of the same theory in the

Zoonomia, the reader perceives, indeed, a light before him, but it is too often the light of a meteor; it dazzles more frequently than it irradiates; and like a meteor too, and in spite of its numerous excellencies and attractions, it has already spent itself and vanished.

It is useless to give numerous examples under this head. The terms *nature, non-naturals; crisis; pores and corpuscles; acute and chronic; humour and idiosyncrasy; digestion, concoction, and dissolution; effervescence, fermentation, and putrefaction; lentor and error loci; sanguineous and nervous; phlogistic and anti-phlogistic; tonic and clonic spasm; action and debility; miasm, contagion, and infection; sthenic and asthenic; excitement and excitability; accumulation and exhaustion; sensitive and irritative motions; decreased volitions; direct and reverse sympathies*:—these terms are sufficient to convey an idea of the succession of influences I refer to; and as they are all to be found in our vocabulary, in conjunction, indeed, with a thousand others of similar discrepancy, they cannot fail to point out the extraordinary intertexture, the *discor-*

dia concors of the medical language of the day, and to enforce the necessity of its correction.

VI. How this important point may be best accomplished is a question which, if fully entered into, would carry us far beyond the limit which ought to be allotted to a single communication. Nevertheless, I cannot consent to close this paper without offering a few hints upon the subject, so as to fix the notice of those who may have better abilities for the purpose, and induce them to bestow upon it a more critical and minute investigation.

The first point that seems to require attention is to discard all equivocal terms as much as possible; and, in cases where this cannot be done, to assign a fixt and individual sense to every term, and never to employ it in any other sense. Sauvages has set an admirable example of this rule in the synopsis prefixed to the different classes of his nosology: nor has less attention been shewn to it by Dr. Willan in the correct definitions prefixed to his treatise on “Cutaneous Diseases;” a work which in some degree, as the learned author candidly

acknowledges, owes its birth to the Medical Society of London, the outline of it having been honoured with the Fothergillian gold medal for the year 1790.

Another rule I would recommend is that of creating as few new words as possible; and, among those already in use, of confining ourselves to the same term to express the same idea, even where we have a choice of numerous synonyms. The following remark of Galen upon this subject is well worthy of being copied not only into this essay but into our memories: “multo lucidius esse opinor unicuique rei seorsim unum nomen, ipsique proprium, indere, eoque perpetuo uti, cum sciam quod communia nomina, quæ alterum non magis quam alterum significant, auditorem confundunt, et perturbant, ut non cognoscat quid fit tandem quod dicitur, priusquam æquivocum distinguatur*.”

The next point to which we should direct our attention is to limit our nomenclature as much as possible to one language alone. It

* De Dyspn. lib. i.

has already appeared that even the nosologies of most repute are a mass of mere gibberish, from their unclassical combination of different tongues that were never meant to coalesce. Of these different tongues there can be no great perplexity in determining which ought to have the preference. Among those of vernacular use there is no one that would be allowed such a precedence: and were such a precedence admitted, there is no one in possession of names sufficient to distinguish of itself every disease of which a system of nosology is expected to treat. Dr. Macbride's system is a sufficient proof of the truth of this observation. His nomenclature aims at being English: yet the names under several of his orders consist *entirely* of exotic terms; and under most of them of Latin, Greek, and English, uncouthly mixt together for the sake of convenience, like foreigners from all countries at a Hamburgh hotel. The only languages therefore that remain to us are the Greek and Latin; and of these two there can be no difficulty in deciding in favour of the former, when we reflect that by far the greater

part of our technology is already derived from it, and that it possesses a facility of combination to which the Latin has no pretensions.

Having thus determined, our next care should be to banish every Latin, as well as every Arabic, Spanish, Italian, and German word in favour of its Greek synonym, wherever such synonym can be fairly traced in the Greek writers. Hippocrates is the first author to whom the nosologist should have recourse for this purpose; and in his failure he may perhaps be best supplied from Asclepiades, Celsus, Cælius Aurelianus, Galen, and Aetius, with an occasional glance at Aristotle as he proceeds, from whom he may frequently glean many a useful term. From these writers the selection should be ample; for a blank of nearly twelve centuries shortly afterwards ensues, in which it will be hardly possible to sift out a word in any degree worthy of preservation: the Arabic writers, who chiefly fill it, having added little except in the case of small-pox, and a few cutaneous diseases, to the common stock of medical infor-

mation, and having nearly confined themselves to writing commentaries upon Hippocrates and Galen. So that I am afraid the judgment which Lord Bacon has passed, in the following passage, upon this long and benighted period, is scarcely more severe than correct.

“ *Scientiæ quas habemus, fere à Græcis fluxerunt. Quæ enim scriptores, Romani aut Arabes, aut recentiores addiderunt ; non multa aut magni momenti sunt ; et qualiacunque sint, fundata sunt super basin eorum quæ inventa sunt à Græcis.—Etiam non omittendum videtur judicium illud, sive vaticinium potius, sacerdotis Ægyptii de Græcis : “ quod semper pueri essent ; neque haberent antiquitatem scientiæ, aut scientiam antiquitatis *.”*”

Descending to the fifteenth century, we may again enrich our vocabulary from a few of the writers who then flourished ; and may continue to add to it from the most celebrated of their successors. The origin, indeed, of a variety of diseases unknown to the Greeks, such as small-pox, syphilis, sea-scurvy, rickets, to-

* *Nov. Organ.*

gether with a great increase and diversity in the families of others, as struma and phthisis, will render such an addition absolutely necessary : and the works of Fracastoro, Baglivi, Sydenham, Boerhaave, Sauvages, Linnéus, and Cullen, may be successfully resorted to for this purpose. To Fracastoro, as I have already observed, we owe the term *syphilis* ; to Baglivi we are indebted for *hysteria* and many other convenient terms ; to Boerhaave the general use of the terminal *itis*, as significative of inflammation. To Sauvages, more than to any other modern author whatever, we are indebted for a revival of a great variety of terms, derived from the Greek physicians, which ought never to have become obsolete. Linnéus and Cullen have shewn far less attachment to a Greek origin, and have been less select in their terms. Yet the former may be said to have given us *atecnia* for *impotence*, a term unquestionably preferable to *anaphrodisia* ; and the latter to have naturalized, though he did not invent, *pyrexia*, an elegant and expressive compound, very inadequately expressed by *πυρετιον, πυρετος συνεχης, πυρετος συνετικος*, or as they are spelt in

Hippocrates, who wrote in the Ionic dialect, *ξυνεχης* and *ξυνετικος**, or indeed any similar phrasing of the Greek writers. Linnéus and Cullen, however, and especially the latter, have great merit as expurgators and proscribers of a vast mass of absurd and useless terms.

The name of Sydenham ought never to be mentioned but with gratitude: he was truly the Hippocrates of his age; yet he has little pretensions to the character of a nomenclator, having rather confined himself to the more important part of marking and describing than of naming diseases; and even in the latter case he has generally preferred a Latin derivation. His *nova febris* has been exchanged with the consent of every one for the *miliaris* of the authors of the *Journal de Medecine*.

From a few other writers, and especially the monogrammists, something may also be gleaned occasionally worthy acceptance. *Nostalgia* is a word of Nenter's invention, and intended to put to flight the *pothopatridalgia* of

* Thus in his Treatise de Morb. Vulg. lib. iii. *πυρετια ξυνεχια διαχωρηματα πουλλα, λεπτα, &c.*

Zwinger, in which, to the consolation of every man's lips and ears, it has very effectually succeeded. Morton, I believe, first appropriated the term *phthisis* to pulmonary consumption; and Dover *diabetes*, a word invented by Aretæus, to the disease now known by this name, but for which Galen used *dipsacus*. *Scorbutus* we have received from Germany, principally through Hoffman and Boerhaave; and, however objectionable its source, it has been too long naturalized to be exchanged for any other term. To whom we are indebted for *scrofula*, I know not: Sauvages gives a reference to Allen; but it was certainly in use long before Allen's time. *Struma**, as employed by Celsus, seems to be a preferable term, and is continued by Linnæus. Upon *variola*, *varicella*, and *rubeola*, I have remarked already. *Trichoma* is the invention of Jachius, a term

* This word appears to be derived from the Greek *στρωμα*, "a congestion, or coacervation," as of straw in a litter, or feathers in a bed; as *στρωμα* is from *στρωννω* or *στρωννυμι* *sterno*, *dejectum expando humis*. The medical dictionaries and glossaries which concur in deriving it from the Latin *struo* err as usual, and only copy from each other: the terminating syllable of *struma* shews evidently that it is derived from a Greek source.

strictly classical, and in every respect superior to the *plica Polonica* of Starnigel, or the *plica Belgarum* of Schenck.

The Greek terms we are in possession of have chiefly reached us through the medium of Latin authors or translators, and hence they are generally characterised by a latinised complexion, and especially in their terminations. A rule being thus established, it should be adhered to in future; and even the existing exceptions be made to comply with it wherever this can be accomplished gracefully and without constraint. Every one writes *typhus* and *synochus*, instead of *tuphos* and *sunochos*, which are the Greek words; *parorchydium* instead of *parorchudion*. But if this orthography be correct, the *syrigmos* of Sagar and Linnéus should be *syrigmus*; the *causos* of Vogel (if retained at all) *causus*, while his *puosuria* should be *pyosuria*, or rather *pyuria*, which is a more common and a far better compound. In like manner we write *paralysis* instead of *paralasis*, and *lyssa* instead of *lussa*, wherever it is employed, as I think it ought always to be, in the place of *hydrophobia*, a term very unnecessarily

invented by Cælius Aurelianus, and by no means pathognomonic of the disease it is now generally made use of to signify; since the symptom it indicates is sometimes a concomitant of other diseases, and sometimes absent from that to which it gives a name. But if *lyssa* and *paralysis* be the proper mode of spelling, then *lues* and *lume*, which are equally derivates from $\lambda\upsilon\omega$, *solvo*, *dissolvo*, are strictly speaking improper, and ought from the first to have been written analogously *lyes* and *lyme*. Custom, however, has so long sanctioned the use of *lues*, that I dare not recommend it to be changed; yet the point is of little consequence, as this term has been long sinking under the more common term of syphilis.

The rule of most importance, however, and what, indeed, appears absolutely necessary to a due simplicity and precision in our nomenclature, is that we pay a scrupulous attention to the sense in which we employ the affixed and suffixed particles (sometimes prepositions, but not always so), which are used in compound terms to express the peculiar quality of the disease denoted by the theme or radical.

Nothing can equal the perplexity which at present exists in medical language, or the difficulty which a student, and especially an unlettered student, lies under from a non-observance of this rule.

I have already remarked that the preposition *para* (*παρα*) is used in such a variety of senses, as, instead of guiding the judgment, to be perpetually leading it astray. The particle *a* (*α*) is subject to the same observation; being sometimes employed as a negative to indicate total privation, and sometimes confounded with *dys* (*δυσ*) merely to imply morbid or defective action: while, as though to make the balance even, *dys*, which is commonly used to express morbid or defective action alone, is at times also confounded with *a*, to signify total privation. Thus *dys-menorrhœa*, which is often restricted to difficult menstruation, or menstruation accompanied with pain and other morbid symptoms, signifies in Sagar and Linnéus suppressed catamenia, the *a-menorrhœa* of Vogel and Cullen; while, in the Cullenian system, the first order of the class *locales* confounds *α, παρα, and δυσ*, by

using them both synonymously, and in the same latitude of senses.

Algia is a termination frequently and elegantly employed to express pain; but the Greeks had also other words by which to denote the same feeling: and hence unfortunately our nosologists, in a morbid hunt after variety, have clogged the language of medicine with such terminations as *cophus* (κοπος), *odyne* (οδυνη), and often *agra* (αγρα): in consequence of which the student, to his utter confusion, not unfrequently meets with such synonyms as *ostalgia*, *ostocophus*, *ostodyne*, perplexingly and uselessly varied to denote the same common idea of *bone-ach*. In like manner *cephal-algia* is made use of to import head-ach, *gastr-odynia* belly-ach, *pudend-agra* (Lin. IV. i. 58) painful sores in the pudendum, and *oneir-odynia* nightmare, or sleep-walking, in which οδυνη appears to be used without any determinate sense.

Itis, in the same manner, is often employed at the close of words as significant of local inflammation. I do not profess to know very exactly the derivation of this term, nor have the etymologists attempted it for us. Pro-

bably it is *ἰεμει*, which in the Iliad means *impetu feror*, and if so it is radically appropriate: but it is to Boerhaave, as I have already observed, that we are indebted for the first general use of it in this peculiar sense, and a sense which is now approved and adopted by every one. Yet if *itis* be thus appropriated, it is impossible not to condemn such terms as *rachitis* and *hydrorachitis*, *ascites* and *tympanites*, which have no reference whatever to local inflammation; or *arthritis* in Linnéus's nosology, which has nearly as little; the local inflammations being in this system enumerated under class III. or *phlogistici*, while *arthritis* occurs under class IV. or *dolorosi*. It is farther to be observed, on the contrary, that, in all the nosologies, we meet with a great variety of local inflammations unindicated in the words selected to express them by any such termination as *itis*, and evincing almost every anomaly of termination, as *ophthalmia*, *cy-nanche*, *pneumonia*, *podagra*, all which occur in Dr. Cullen's class I. or *pyrexiaë*, order *phlegmasiaë*.

Rhæa and *rhagia* are terminations capable perhaps of admitting an easy distinction, but which have often been used indiscriminately. Both these, indeed, are employed (with a single exception, to which I shall advert presently) to import a præternatural flux of some kind or other; but *rhagia*, which ought to be regarded as an elision of *hæmor-rhagia*, is usually, and ought always to be limited to a præternatural flux of blood, as in *rhinor-rhagia* (epistaxis), *enter-rhagia* (blood from the intestinal canal), and *menor-rhagia*: while *rhæa* is fairly applicable to a præternatural flux of any other sort, as *otor-rhæa*, *gonor-rhæa*, *leucor-rhæa*, *diar-rhæa*, and *perir-rhæa*, a term employed by Hippocrates in the sense of *enuresis*. The single exception I allude to is *menorrhæa*, which imports a natural flux and in a healthy proportion: and to avoid the anomaly resulting from this single exception, I would totally exchange the term for its synonym *catamenia*, or rather for *menia* alone, without the preposition, which is altogether superfluous, and is already omitted in all the

compounds of $\mu\eta\nu$, as also in the Latin homonyms *menses* and *menstruatio**.

Dia ($\delta\iota\alpha$) is employed with meanings somewhat different, but possessing in every instance a shade of resemblance, and always involving the idea of separation; as in *dia-betes* and *diar-rhœa*, “a passing or flowing through;” *dia-crisis* and *dia-gnosis*, “judgment or distinction by the separation of symptom from symptom;” *dia-stole*, *dia-stesis*, “dilatation or the separation of part from part.” It is not necessary to notice this preposition any farther.

To reduce, then, the anomalies thus pointed out to some degree of regularity, to make them intelligible to the student, and practically useful to the adept, I beg leave to submit the following regulations.

1. Let the particle *a* (α) express alone the idea of total privation; as in *amentia*, *agalactia*, *amenorrhœa*.

* Hippocrates occasionally uses the term $\gamma\upsilon\nu\alpha\iota\kappa\epsilon\iota\alpha$ (*gynœcia*, or, in the language of Apuleius, *fœminalia*) instead of *menia* or *menorrhœa*, as in his treatise *De Morbis Vulgaribus*, lib. I. *Æger* xiv. $\gamma\upsilon\nu\alpha\iota\kappa\epsilon\iota\alpha$ δὲ σμικρὰ ἐπέφαινετο. ποῦντι τούτων πάντων ξυνεχέες.

2. Let *dys* (δυσ) express alone the idea of deficiency, as its origin δυνω or δυσμι most naturally imports, and as we find it employed to express in *dys-pnæa*, *dys-cinesia*, and *dys-phagia*.

3. As an opposite to *dys*, let *en* (εν) be employed as an augmentive particle, as we have it in *en-harmonic*, *en-telechia*, and *en-ergetic*. *En* is not often, indeed, a medical compound, nor do I recollect its being employed in more than two instances; *encephalon*, in which it has the sense of *interior* (a word, indeed, that has been long falling into disuse), and *enuresis*, in which it imports excess, and is consequently used as now recommended. Thus restricted, εν and δυσ will have the force of ὑπερ and κατω, but will be far more manageable in the formation of compounds.

4. Let *agra* (αγρα) be restrained to express the idea of simple morbid affection in an organ, synonymously with the Latin *passio*, or the *حرق* (*berh*) of the Arabians.

5. Let *itis* (ιτις) express alone the idea of inflammatory action, as in *cephalitis*, *gastritis*, *nephritis*.

6. Let *algia* (*αλγία*) express alone the idea of pain or ache, to the banishment of such useless synonyms as *odyne* and *cosios* or *cofus*.

7. Let *rhagia* (from *ῥήσσω* *rumho*) be confined to express a præternatural flux of blood.

8. Let *rhæa* (from *ῥέω* *fluo*) express a præternatural flux of any other kind.

By adopting these few regulations, which, instead of innovating, only aim at reforming, our technology, if I mistake not, would be in many respects equally improved in simplicity, in elegance, and in precision; the student would easily commit it to memory, and the practitioner have a real meaning in the terms he makes use of. To prove the truth of these assertions, the subjoined table will be sufficient, which may be easily extended to any length by the use of other particles or prepositions, or the introduction of other themes or radical terms of the medical vocabulary; a vocabulary at present equally confused and redundant, but which, when thus simplified and cleared of the numerous synonyms and equivalents that overload it, might be reduced to at least a third part of its present length, and be

rendered as much more conspicuous as it would be more concise. The adoption, moreover, of some such regulations as those now proposed, could not be more beneficial to our nomenclature than to our systems of nosology—a branch of medical literature which, whether contemplated under the best synoptic or the best methodic arrangements of the day, stands in need of almost as much correction as our language. But I am overstepping the subject to which I had limited myself; and am trespassing upon one of perhaps still greater difficulty and delicacy, and which I readily leave to those who are better qualified for the task.

RADICAL.

COMPOUNDS.

	a	dys	en	agra	algia	itis	rhæa	rhagia
<i>Mên. Menia,</i> Menses.	<i>Amenia.</i> Suppressed Menstruation. Amenorrhœa. <i>Vog. Cul.</i> Dysmenorrhœa. <i>Sag. Lin.</i>	<i>Dysmenia.</i> Deficient Menstruation. Dysmenorrhœa. <i>Vog.</i>	<i>Emmenia.</i> Immoderate Menstruation. Menorrhœa Immodica. <i>Saw.</i> Catameniorum fluxus. <i>Hip. Fæsl.</i>	<i>Menagra.</i> Morbid Menstruation generally.	<i>Menalgia.</i> Painful or difficult Menstruation. Dysmenorrhœa. <i>Aut. Var.</i>		<i>Menorrhœa.</i> Whites. Leucorrhœa. <i>Saw.</i> Menorrhœa alba. <i>Cul.</i> Fluor albus. <i>Alior. Aut.</i>	<i>Menorrhagia.</i> Uterine Hæmorrhage. Menorrhagia rubra. <i>Cul.</i> Hæmorrhagia uterina. <i>Morton.</i>
<i>Cephale,</i> the Head.	<i>Acephalia.</i> Headless: applied to monsters thus born.		<i>Encephalia.</i> Morbid Enlargement of the Head. Encephalocèle. <i>Saw.</i> Hernie du Cerveau. <i>Le Dran.</i>	<i>Cephalagra.</i> Morbid Affection of the Head generally. Cephalæa. <i>Saw.</i>	<i>Cephalalgia.</i> Head-ach. Cephalalgia. <i>Saw. & Cul.</i> Explesis. <i>Hippocr.</i> Capiplenium. <i>Baglivi.</i>	<i>Cephalitis.</i> Inflammation of the Brain. Cephalitis. <i>Saw.</i> Siriasis. <i>Hippocr.</i> Apoplexia purulenta. <i>Morgagni.</i> Inflammation de Cerveau. <i>De Mezerey.</i>		
<i>Limes.</i> Appetite. The digestive FUNCTION.	<i>Alimia.</i> Total loss of Appetite. Anorexia. <i>Cul.</i>	<i>Dyslimia.</i> Depraved Digestion (commonly so called). Dyspepsia. <i>Cul.</i> Apepsia. <i>Vog.</i>	<i>Ellimia.</i> Canine Appetite. Bulimia. <i>Saw.</i> Adephagia. <i>Vog.</i> Cynorexia. <i>Al.</i>	<i>Limagra.</i> Morbid or false Appetite. Pica. <i>Saw. Sag.</i> Citta. <i>Lin.</i> Alliotrophagia. <i>Vog.</i> Malaccia. <i>Alior.</i>				
<i>Gaster,</i> the Stomach. The digestive ORGAN.	<i>Agastria.</i> Stomachless: applied to monsters thus born.	<i>Dysgastria.</i> Contracted Stomach.	<i>Engastria.</i> Stomach morbidly or preternaturally enlarged. Gastrocele. <i>Saw.</i>	<i>Gastragra.</i> Morbid Affection of the Stomach generally.	<i>Gastralgia.</i> Stomach-ach. Gastrodynia. <i>Saw.</i>	<i>Gastritis.</i> Inflammation of the Stomach. Gastritis. <i>Cul. Saw.</i>		<i>Gastrorrhagia.</i> Vomiting of Blood from the Stomach. Hæmatemesis. <i>Autor.</i>
<i>Pneumon,</i> the Lungs.	<i>Apneumonia.</i> Lungless: applied to monsters thus born.	<i>Dyspneumonia.</i> Imperfect Conformation of the Lungs.		<i>Pneumonagra.</i> Morbid Affection of the Lungs generally.	<i>Pneumonalgia.</i> Painful Respiration. Orthopncea. <i>Aut.</i> Dyspnœa. <i>Alpini.</i> Anxietas.	<i>Pneumonitis.</i> Inflammation of the Lungs. Pneumonia. <i>Cul.</i> Pulmonaria. <i>Alpini.</i>	<i>Pneumonorrhœa.</i> Purulent Discharge from the Lungs. Anacatharsis phthisica. <i>Saw.</i> Vomica. <i>Alior.</i> Tussis purulenta.	<i>Pneumonorrhagia.</i> Discharge of Blood from the Lungs. Hæmorrhagia. <i>Vog.</i> Hæmoptoe. <i>Alior.</i>
<i>Entera,</i> the Intestines. The fecal ORGAN.				<i>Enteragra.</i> Morbid Affection of the Canal generally.	<i>Enteralgia.</i> Colica. <i>Cul.</i> Flatulentia. <i>Saw.</i>	<i>Enteritis.</i> Inflammation of the Intestines. Enteritis. <i>Saw. Cul. Lin.</i> Intestinorum Inflamm. <i>Boerh.</i>		
<i>Enteria,</i> the fecal FUNCTION.	<i>Anenteria.</i> Costiveness. Obstipatio. <i>Cul.</i>	<i>Dysenteria.</i> Feces small in quantity, and discharged with violent straining. Dysenteria. <i>Aut.</i>	<i>Enenteria.</i> Looseness. Diarrhœa. <i>Aut.</i> Passio Cœliaca. Lienteria.				<i>Enterrhœa.</i> Purgings and Vomiting. Cholera. <i>Cul.</i> Diarrhœa cholericæ. Cholera Morbus.	<i>Enterrhagia.</i> Intestinal Discharge of Blood. Profusio. <i>Lin.</i> Hæmorrhagia. <i>Vog. Boerh.</i> Melæna. <i>Alior.</i>

RADICAL.

COMPOUNDS.

	a	dys	en	agra	algia	itis	rhæa	rhagia.
<i>Ouron,</i> Urine.	<i>Anuria.</i> Suppression of Urine. <i>Ischuria. Cul.</i> <i>Saw. et al.</i>	<i>Dysuria.</i> Difficult discharge of Urine. <i>Dysuria. Cul.</i> <i>Saw. Lin.</i> <i>Stranguria, alior.</i>	<i>Enuria.</i> Involuntary Flux of Urine. <i>Enuresis. Saw.</i> <i>Lin. Cul.</i> <i>Paresis. Aretæus.</i>	<i>Uragra.</i> Morbid Flux of Urine generally.			<i>Urirrhæa.</i> Purulent Urine. <i>Pyuria. Saw.</i>	<i>Urirrhagia.</i> Bloody Urine. <i>Hæmaturia.</i> <i>Saw. Cul.</i>
<i>Ops, opos,</i> the Sight. The SENSE of Vision.	<i>Anopia.</i> Sightlessness. <i>Caligo. Saw. Vog.</i> <i>Cataracta. Lin.</i> <i>Amaurosis. Vog.</i> <i>Sag.</i>	<i>Dysopia.</i> Weakness of Sight. <i>Dysopia. Cul.</i> <i>Amblyopia. Saw.</i> <i>Sag.</i>	<i>Enopia.</i> Sight morbidly acute. <i>Oenopia } Aut.</i> <i>Oxyopia } Græc.</i> <i>Visus acrior.</i> <i>Darwin.</i>	<i>Opagra.</i> Morbid Sight generally. <i>Myopia.</i> <i>Presbytia.</i> <i>Pseudolepsis.</i>				
<i>Ophthalmos,</i> the Eye. The ORGAN of Vision.	<i>Anophthalmia.</i> Eyelessness.	<i>Dysophthalmia.</i> Contracted or Pig-eye.	<i>Enophthalmia.</i> Protuberant Eye- ball. <i>Prolapsus Oculi.</i> <i>Buphthalmia } Aut.</i> <i>Ecpiesmus } Gr.</i> <i>Staphyloma.</i>	<i>Ophthalmagra.</i> Morbid Affection of the Eye-ball generally.	<i>Ophthalmalgia.</i> Ache of the Eye- ball.	<i>Ophthalmitis.</i> Inflammation of the Eye-ball.	<i>Ophthalmirrhæa.</i> Flux of the La- chrymal Humour. <i>Epiphora. Saw.</i> <i>Cul. Lin.</i>	
<i>Otis,</i> the Ear. The ORGAN of Hearing.	<i>Anotia.</i> Earless.	<i>Dysotia.</i> Ears preternatu- rally small or defective.	<i>Enotia.</i> Long Ears. Ass's Ears. <i>Proptoma auricu- larum. Saw.</i> A Monstrosity com- mon to the Siamese.	<i>Otagra.</i> Morbid Affection of the Ears ge- nerally.	<i>Otalgia.</i> Ear-ach. <i>Otalgia. Saw.</i>	<i>Otitis.</i> Inflammation of the Ear. <i>Otitis. Vog.</i>	<i>Otirrhæa.</i> Morbid Discharge from the Ear.	
<i>Acoues,</i> Hearing. The SENSE of Hearing.	<i>Anacusia.</i> Deafness. <i>Cophosis. Saw.</i> <i>Dysecæa. Cul.</i> <i>Surditas. Aut.</i> <i>Lat.</i>	<i>Dysacusia.</i> Difficulty or Hardness of Hearing. <i>Dysecæa. Saw.</i> <i>Paracusis. Cul.</i> <i>Auditus difficilis.</i> <i>Hoffman.</i>	<i>Enacusia.</i> Hearing acutely strong. <i>Oxycæa. Saw.</i> <i>Auditus acrior.</i> <i>Darwin.</i>	<i>Acusagra.</i> Morbid Affection of Hearing ge- nerally. <i>Paracoe. Hippocr.</i> <i>Paracusis. Saw.</i>				
<i>Pous, podos,</i> the Foot. The common Seat of the Gout.				<i>Podagra.</i> Gouty Habit.	<i>Podalgia.</i> Chronic Gout- pains.	<i>Poditis.</i> Acute Paroxysm of the Gout.	<i>Podorrhæa.</i> Gouty Discharge.	

ART. II.

MEMOIRS OF THE LATE WILLIAM HEWSON,

Fellow of the Royal and Medical Societies, and Teacher of Anatomy, in London.

By J. C. LETTSOM, M.D. LL.D. &c. Pres. M. S.

Read June 22, 1807.

THE subject of these Memoirs was born on the 14th of November 1739, at Hexham in Northumberland, where his father, William Hewson, had long practised as a surgeon and apothecary, with much reputation. Mary, his mother, descended from the Herons, and allied to many respectable families, was a native of the same town. Young William resided with his parents, and attended at the same time the grammar school at Hexham. At a suitable age he was articled to his father, and at the expiration of his apprenticeship resided some time as a pupil with Mr. Lambert of Newcastle. He was there noticed for his close application to study, and a diligent performance of his professional duties.

In the autumn of 1759, being only twenty

years of age, he came to London, and resided with that distinguished anatomist, the late John Hunter ; he attended at the same time the lectures of the no less celebrated brother Dr. William Hunter, who then delivered his anatomical lectures at a house in Covent Garden. The former, at this period, had the charge of instructing the pupils in the dissecting room ; but being under the necessity of going abroad with the army in 1760, young Hewson, whose assiduity and skill had attracted the attention of the two celebrated brothers, was requested to take the charge of the dissecting room, in the absence of John Hunter.

Whilst he occupied this station, he not only acquired additional experience in practical anatomy, but likewise obtained such pecuniary emoluments as enabled him to enlarge his plan of studies, and thereby to add to his professional knowledge. However ambitious the youth might have been, vanity was the most distant from his ingenuous mind ; but to become the substitute of a Hunter at the age of twenty-one, must afford a convincing proof of the great anatomical proficiency of the pupil.

The prominent object of his coming to the metropolis was the acquisition and increase of professional knowledge ; and as soon as his pecuniary resources enabled him further to extend his studies, he became a pupil at Guy's and St. Thomas' hospitals. He attended the medical lectures of Dr. Hugh Smith, and those of midwifery under Dr. Mackenzie.

Dr. Hunter, from want of proper assistance, did not deliver a course of lectures this year (1760), but having experienced the advantages resulting from this practice, he was disposed to resume it, and for this purpose he made proposals to young Hewson to admit him into a participation of his profits, provided he would previously devote one year to professional studies in the College of Edinburgh. A proposal so congenial with his wishes, met his cordial acceptance. He was recommended to the professors by Dr. Hunter and Sir John Pringle ; the latter, who was not indiscriminate in bestowing favours, continued his friendship to the latest moments of Mr. Hewson's life. He continued his studies till the autumn of 1762, when he returned to London, and entered into

the proposed agreement with Dr. Hunter, and occasionally delivered the anatomical lectures at the theatre in Litchfield Street.

In the summer of 1765, Mr. Hewson visited France; and, returning through Flanders and Holland, he arrived in London at the commencement of the anatomical course, which he delivered in connection with Dr. Hunter.

In the summer of 1767, he paid a visit to his parents at Hexham. His father was then in a declining state of health, and died on the 8th of November following, leaving a widow and three children, the only survivors of eleven.

In the succeeding summer, Mr. Hewson visited the sea coast of Sussex, more effectually to investigate the anatomy of fishes, which had before led him to the discovery of the lymphatic system in them; and in the winter following his account of the lymphatic system in birds and fishes, and particularly in the turtle, was communicated to the Royal Society, of which body he was soon after elected a member, and in the ensuing year received the honour of the Copleyan medal.

In 1769, Dr. Hunter completed his spacious

house and theatre in Windmill Street, in which an apartment was allotted to Mr. Hewson for his residence. The lectures, which before this time had been given in the evening by candle-light, for want of suitable accommodation, were now delivered in the forenoon. The emoluments derived from them were equally divided ; and Mr. Hewson's pecuniary acquisitions from the practice of surgery being also considerable, he was encouraged to enter into the marriage state in 1770, with Miss Stevenson, a lady under the patronage of Dr. Franklin, to whom he was affectionately attached, and to whom many of the letters since published were addressed.

In the subsequent spring he published his "Experimental Inquiry into the Properties of the Blood," some part of which had previously appeared in the 60th volume of the Philosophical Transactions.

At this time, with the most gratifying prospects before him, he received with equal surprise and regret the resolution which Dr. Hunter now conveyed to him, of dissolving the connection between them in the anatomical

lectures, after the following winter ; stating as the reason, that Mr. Hewson having, in consequence of his marriage, removed from under his roof, it was impossible he could attend to anatomy in the manner Dr. Hunter wished an assistant to do. Motives of action can but rarely be ascertained : although Mr. Hewson had acquired considerable reputation as an anatomist, it had been in great measure under the auspices of Dr. Hunter, whose individual celebrity and princely fortune might be expected to place him above suspicion of jealousy towards a coadjutor, in whose scientific acquisitions he might rather have exulted, as having been derived from his own early instructions and subsequent patronage.

In the winter the anatomical lectures were continued in concert. In moments of leisure Mr. Hewson employed himself in making anatomical preparations for his future course : that these were not inconsiderable, may be inferred from the disposal of them after his death, to his friend Magnus Falconar, for seven hundred pounds ; an irrefragable proof of the effects of industry and perseverance.

In September 1772 he commenced his own separate lectures on anatomy in Craven Street, which he introduced by a lecture on the uses of the spleen and thymus. During this winter he published a second edition of his “*Experimental Inquiry*,” in 8vo. It was dedicated to Sir John Pringle, as a testimony of his gratitude for the undeviating friendship of this illustrious physician.

In the spring of 1774 he published his work on the Lymphatic System, with explanatory plates, dedicated to his friend the celebrated Benjamin Franklin.

In viewing the situation of our associate at this period, the most gratifying prospects presented themselves, where genius and industry were rewarded with success, and domestic amities with felicity. The theatre in which he delivered his lectures, and expounded his discoveries, was crowded with men of science, as well as with pupils, to listen to a youth grown sage by experimental researches. His practice as a surgeon and accoucheur was extensive: he could contemplate a rising family with pleasure, and as likely to become the

partners of his labours, and his successors in that school of science, which his genius and industry had created. Thus surrounded with immediate enjoyments, and with rational hope anticipating the future, on the 18th of April, 1774, he was attacked with a fever, occasioned by a wound he received in dissecting a morbid body : this induced him to omit lecturing on the 19th ; but on the 20th he resumed the task for the last time, and died on the 1st of May, at the age of thirty-five, leaving behind him two sons, and his wife in a state of pregnancy.

His eldest son William died in 1802 : the survivor, Thomas Tickell Hewson, is now a distinguished physician in the city of Philadelphia. The daughter, born after his decease, is married to Mr. Caldecott, of the same city ; and the widow closed a well-spent life in the year 1795.

Mr. Hewson's papers were most of them first published in the *Philosophical Transactions*, and were afterwards collected in volumes. These papers appeared in the following order.

1. An Account of the Lymphatic System in Birds; in a Letter to Dr. William Hunter, M.D. F.R.S., and by him communicated to the Royal Society. *Phil. Tr.* vol. XXIII. p. 217, Anno 1768.
2. An Account of the Lymphatic System in Amphibious Animals, communicated by the same. *Phil. Tr.* vol. XXIV. p. 198, Anno 1769.
3. An Account of the Lymphatic System in Fishes. *Ibid.* p. 204.
4. Experiments on the Blood, with some Remarks on its Morbid Appearances. *Phil. Tr.* vol. XXV. p. 368, Anno 1770.
5. On the Degree of Heat which coagulates the Lymph, and the Serum of the Blood; with an Inquiry into the Causes of the inflammatory Crust, or Size, as it is called. *Ibid.* p. 384.
6. Further Remarks on the Properties of the Coagulable Lymph; on the Stopping of Hæmorrhages: and on the Effects of Cold upon the Blood. *Ibid.* p. 398.
7. On the Figure and Composition of the Red Particles of the Blood, commonly called the Red Globules. *Phil. Tr.* vol. XXVIII. p. 303, Anno 1773.

To these may be added a posthumous work, edited by his friend and anatomical successor, Magnus Falconar, in three parts, in Svo, anno 1777. The two first parts were collected from the *Philosophical Transactions*, as well as the first chapter of the third part; but, amongst all his papers, not the smallest note upon the subject of the other four chapters

of this part could be found ; the deficiency was, however, supplied by his ingenious successor. The contents are as follow :

Chap. 1.—On the Figure and Composition of the Red Particles of the Blood, commonly called the Red Globules.

Chap. 2.—On the Structure of the Lymphatic Glands.

Chap. 3.—On the Situation and Structure of the Thymus Gland.

Chap. 4.—On the Situation and Structure of the Spleen.

Chap. 5.—Containing an Account of the Manner in which the Red Particles of the Blood are formed, deduced from the Experiments and Observations related in the preceding Chapters.

When we consider the limited education which, from early pecuniary difficulties, Mr. Hewson received, with the labour and time necessarily occupied in making anatomical preparations, and in delivering lectures, we cannot but praise his industry, and admire the number of his discoveries and the extent of his various publications ; whilst it is impossible not to regret his premature death, in the moment of eager and steady pursuit of science founded upon the basis of experimental research. His discovery of the lymphatic system in birds

and amphibious animals acquired him early celebrity, as is testified by the honour of the Copleyan medal, and also of a seat in the Royal Society. His claim to this discovery was, however, soon after contested by Professor Monro of Edinburgh, who sent a letter to his brother in London, in which he observed that he had anticipated Mr. Hewson, “by having
“ injected the lacteals of a turtle; and by hav-
“ ing mentioned those vessels in birds and fishes
“ above four years before, and which he had seen
“ but not injected.” That part of the professor’s letter which contained this claim was, by his desire, read before the Royal Society, and was desired to be shewn to every body.

This very much surprised Mr. Hewson, as he remembered to have heard Dr. Monro acknowledge, in the spring of 1762 (that is subsequent to the time when he now said he had seen those vessels in birds and fishes), that they were not then discovered; and that he had sought for them in vain, in birds, by a variety of experiments. This was confirmed from the notes of Dr. Haygarth, taken in 1764, while a student at Edinburgh. Besides this, the testimonies of

Dr. Taylor of Reading, Dr. Maddocks of London, and Mr. Hull, Surgeon at Stevenage, went to the same conclusion, and combined to prove Mr. Hewson's just claims to the discovery in question.

The blood, so essential to all the functions of life, has often been the subject of experiment, and much has been acquired as to the knowledge of its constituent parts: probably, however, much remains yet unknown, and particularly the causes of those changes in it which take place in different ages, and in various diseases of the human frame.

The experiments published by Hewson were numerous and interesting, and afforded a solution of many phenomena, both in the healthy and morbid states of the body, that were before unexplained. The cause of the spontaneous separation of the blood into serum and crassamentum has not yet been ascertained. Mr. Hewson found that the coagulation takes place equally in close vessels and in the open air, and that it is not prevented by diluting the blood with water. The history of the changes observable in the state and consistence of the blood, in

consequence of some change in the action of the solids, is related with perspicuity : he attributes, however, the red colour of this fluid to the action of the air taken into the lungs ; but the species of air which produced this effect was unknown to him : indeed, the chemistry of animal bodies, which has since been so greatly elucidated by Crawford, Fourcroy, Deyeux, and other distinguished chemists of the present day, was then only in its infancy.

ART. III.

HISTORY OF FATAL EFFECTS FROM THE ACCIDENTAL USE OF WHITE LEAD;

In a Letter to the President,

By JOHN DEERING, Surgeon, F. M. S.

With additional Remarks by WILLIAM SHEARMAN, M.D. F.M.S.

Read October 9, 1809.

AT the sitting of January 30, 1809, a verbal communication was made to the Society, by the author of the following memoir, of some extraordinary symptoms, followed by the death of several individuals of a family whom he had attended. It appearing to the members present highly probable that these unfortunate events originated from the poison of lead*, a committee was deputed to investigate and to endeavour to detect the real cause of the fatality; which the following relation fully and satisfactorily explains.

* On the following evening Dr. Shearman delivered the annexed communication, which served to confirm the probability of these suspicions; although Mr. D. had been hitherto unsuccessful in detecting the precise origin of the exciting cause.

Aldersgate Street, Oct. 4, 1809.

IF the following narrative do not convey any important medical information, it may not be wholly uninteresting, as it relates to a domestic calamity, occasioned by a circumstance which at the time was wholly unsuspected; and it may at least inculcate the necessity of a closer investigation of symptoms from causes not fully ascertained, and at the same time evince the fallacy of hasty prognostics.

On the 21st of October last, I was desired to visit Mrs. R., the wife of a respectable tradesman in Aldersgate Street, who complained of violent pain in the scrobiculus cordis, with great soreness of the epigastric region when pressed upon. She had vomited a considerable quantity of bilious matter, and at the same time her bowels were constipated: the pulse was calm and regular, the tongue clean and moist, and there was no symptom of fever present. She immediately took a cathartic, which operated, and an opiate in the evening. The following morning the patient appeared relieved; in the

evening, however, the pains and vomiting recurred, and these symptoms continued for some successive days, in so distressing a degree, that it was deemed advisable to consult the family physician, which was done on November 4, 1808. At this time these symptoms continued as already intimated, without any appearance of fever, and hence the physician was induced to consider the affections as of a rheumatic and spasmodic nature.

In a few days, in consequence of the amendment of the patient, he discontinued his visits. In about a week after this period, a boy in the same family, nearly sixteen years of age, was seized with symptoms exactly similar to those of the preceding case, and similar remedies afforded only partial relief, till at length he was removed into the country, and thereby recovered his health.

A week after the attack of this youth, the eldest child, a boy six years old, was also seized with analogous symptoms, and, the mother having relapsed into her former state, the physician was again consulted on the 19th of November. At this time three other per-

sons in the family laboured under similar affections, and suspicions were now entertained that some poisonous substance might have caused this general indisposition of the family; but after minute investigation no one circumstance was discovered to confirm this suspicion, or to elucidate the source of so extensive a calamity.

The sickness and pain continued unabated in Mrs. R.; but the son, after the period of a fortnight, was deemed in a state of convalescence by his physician, who discontinued his attendance; he was, however, soon after seized with convulsions, and expired within a few hours. Unexpected and severe as this shock was, Mrs. R. afterwards gradually grew a little better. She had hitherto continued to suckle her child, which, it being fifteen months old, she was advised to wean: to this she reluctantly consented. In about ten days afterwards the child became somewhat costive, without any other apparent indisposition; but at this period it was seized with vomiting and convulsions, and suddenly expired. The unhappy parent now experienced a return of her

complaints, and, under a persuasion of the inefficacy of professional aid, she was prevailed upon to consult an empiric, whose attendance, though continued to the end of the year, proved unavailing; and on the 3d of January, 1809, she had the advice of Mr. Chevalier, an experienced surgeon, who considered the patient's complaint to be chronic rheumatism; and by the use of clysters of warm water, oily mucilaginous medicines, fomentations, and vesicatories, she appeared to experience more relief than at any period since the first attack; but, although the vomiting and sickness were less violent and frequent, the pain and soreness of the abdomen, first complained of, never entirely subsided: she was, however, able to sit up and amuse herself with a little needlework, and even to go about the domestic concerns of the family, and Mr. Chevalier had proposed to pay his final visit on the 21st. On the morning of this day she rose at ten o'clock, and within the space of an hour afterwards, whilst standing near the desk of drawers, she suddenly exclaimed, "I am dying!" She was seized with convulsions, which continued till

five o'clock in the afternoon, when she expired.

On the subsequent day, Mr. Chevalier, whose anatomical skill is well known, examined the body by dissection. Neither the thoracic and abdominal viscera, nor the brain, upon the most minute examination, exhibited the least appearance of disease; in short, not the least trace could be discovered of any morbid affection.

With respect to the three other persons already mentioned to have been indisposed, the servant maid, one of them, was conveyed to her friends, and recovered. A sister-in-law of Mrs. R. also recovered; but the third, who was her mother-in-law, died, after lingering under disease till March.

These circumstances having been cursorily communicated to the Medical Society, Dr. Adams, Dr. Hamilton, and Mr. Lawrence, were requested to visit the house of this unfortunate family, and to endeavour to ascertain the cause of the calamity. Every culinary article and the whole premises were accurately examined, but without its leading to any dis-

covery. It appeared, indeed, that Mr. R., the husband of the deceased lady, had purchased a cask of sugar at a sale, a considerable part of which had been disposed of to some friends in the country, who had used it without inconvenience, and hence no suspicion was entertained of this article having produced the fatality in Mr. R.'s family.

In this state of uncertainty, Dr. Laird, another member of the Medical Society, visited the house; and, on examining the cask which had contained the sugar, he observed a white powder adhering to its inner surface, and which, on being heated by the blow-pipe on charcoal, afforded globules of lead in the metallic state.

The mystery was thus at length developed. The sugar had been injudiciously put into a cask which had previously contained white lead. That part of the sugar which was sent into the country had probably been taken out of the middle of the cask, and had never come in contact with the lead; whilst that which was used by the family, having been taken from the side, was impregnated with this me-

tal, and doubtless was the source of the fatal events described.

Of nine persons in this family, who were more or less indisposed, four died, and the effects of the poison appear to have been nearly in the ratio of their respective ages.

The infant, fifteen months old, was attacked and expired within the space of twenty-four hours; the child six years of age survived a fortnight; Mrs. R., aged forty, lingered three months before the fatal event took place; and the mother-in-law, aged sixty-seven, died four months after the attack.

The symptoms in each were very similar. The vomiting, pain in the stomach, and costiveness, marked the attack of the disease; and the soreness of the epigastric region in those who recovered was not removed by medicine, but seemed rather gradually to wear away by time or change of air. The matter vomited was usually of a dark yellow colour, though sometimes green; the fæces were in general dark coloured; but in the case of Mrs. R. they were completely white during the space of twenty-four hours only.

There was a considerable sameness in the medical treatment. The opiates which were given afforded no mitigation of the symptoms, unless joined with cathartics, and aided by fomentations, &c. The countenances of all the patients exhibited a pale, sickly, wan aspect. The pulse in each was slow and regular, rather indeed sluggish, and generally below the natural state; but in no instance was there any symptom of paralysis.

J. DEERING.

FURTHER OBSERVATIONS ON THE SAME
SUBJECT.

By WILLIAM SHEARMAN, M.D. F.M.S.

THE circumstance related in the preceding communication of several persons in the same family being attacked with similar symptoms, differing only in degree, and resembling in appearance those of the colica pictonum, the exciting cause of which could not be discovered after the most accurate research, brings to my recollection an occurrence which happened within my observation several years ago, where this dis-

ease raged with different degrees of violence among a great number of people, produced in all of them by the same unsuspected cause, and which, in its incipient and milder state, from its general prevalence, was not recognised either by the other practitioners of the town where I then resided, or myself, to be the genuine painters' colic.

This town, a sea-port in Essex, contained between three and four thousand inhabitants, and at the time I speak of, very many people, chiefly adults, and a greater proportion of them men, complained of occasional violent colic pains, chiefly occurring after meals, attended with an obstinate costiveness; and although these symptoms were for a time relieved by the use of purgatives and other means, they almost universally recurred. The progress of the disease, even in those cases where it attained its utmost violence, was in almost every instance so insidious and so slow, as to leave us unapprehensive of its true character; which, however, was at length brought to light in the following manner.

An infant, under twelve months, at the

breast, who had been subject to complaints arising from acidity of the food, was tormented with most excruciating pain, apparently in the bowels, attended by a very great degree of constipation, and accompanied with violent straining efforts at evacuation, resembling tenesmus. The sufferings of this poor little child were in the highest degree distressing, and it obtained but temporary relief from the warm bath, laxative injections, those of an anodyne quality, the throwing up into the rectum warm oil, opiates and purgatives combined, or from any treatment whatever that could be suggested. The seeing so unusually severe a case, suggested to my mind the probability that some improper substances had been exhibited to the little patient, and I was earnest in my enquiries to this point. All my endeavours only ascertained that the nurse had occasionally given the child a tea spoonful or two of ardent spirit in its food; a practice, which, although I much reprobated, I knew to be too common among nurses, solely to account for this violent disease. My patient at length fell a victim; and a very short time after, the father of

the child regretting to me the mismanagement of its nurse in giving it spirits, observed, that he himself was occasionally tormented with pains in his bowels, which he was inclined to attribute to drinking a single glass of Hollands and water every night. This induced a suspicion in my mind; and upon dropping into a small quantity of the spirits a single drop of the volatile tincture of sulphur of the old London Pharmacopœia, it assumed a very dark colour, affording a certain evidence of its containing a metallic poison. This Hollands geneva had been bought at the king's excise warehouse in the town, where many hundred gallons were annually sold, that had been seized by the excise officers from persons attempting to smuggle it into this country. The gentleman, grieved at the loss of his child, which he could no longer fail to attribute to its true source, brought up the chief managing officer before the magistrates; when he confessed that the whole of the quantity of Hollands sold at the last sale had been impregnated with sugar of lead, for the purpose of depriving the spirit of the colour which it always

obtained by being kept for some time in the tubs in which it was brought over sea by the smugglers, and the loss of which colour enhanced its price by three or four shillings a gallon. This circumstance afforded an easy explication of the cause of the malady which had so generally prevailed; and henceforth none other than coloured Hollands were exposed to sale at the excise warehouse, as had been the custom previous to this scientific attempt of the above officer, at once to increase the king's revenue and his own.

This recital strongly illustrates the obscurity in which the occasional causes of disease may sometimes be involved; and, as a proof of the difficulty of raising suspicion of the deleterious quality of substances, I may mention, that among those who died on this occasion was a dissenting clergyman, about sixty years of age, a man of good sense and observation, of temperate habits (if the daily custom of taking a glass of spirits and water after supper is not to be considered a deviation from the rules of temperance), whose wife carried on the business of a druggist; and it may be supposed

they were both acquainted with the noxious qualities of the preparations of lead: yet it appeared that the sugar of lead with which this spirit was impregnated had been bought at their house by the exciseman himself, and in quantities of 28 lbs. at a time; but it did not occur to either of them, or to his medical attendant, that the disorder was connected with the drinking of the Hollands. It is to be remembered, that in the early stages we have no certain diagnostic signs by which the colica pictonum can be distinguished from the other species of colic; it is only by its ultimate effects, or by a knowledge of its exciting causes, that we can confidently pronounce concerning the existence of the disease.

W. SHEARMAN.

ART. IV.

HISTORY OF A CASE RESEMBLING HYDROPHOBIA, FROM THE BITE OF A CAT.

By JOSHUA DIXON, M.D., of Whitehaven, Corresponding Member of the Medical Society.

Read Nov. 27, 1809.

MISS J. W., the daughter of Mr. R. W., aged eighteen years, on January 22, six p.m. 1809, when lifting up the valance of a bed, was seized, by the teeth and claws of a cat, in the most ferocious manner. The animal remained fixed on her fingers and hands, and was rather suspended than dragged from the chamber to the stair-case: it was then forcibly, and with considerable difficulty, compelled to relinquish its hold, and soon after was killed. The cat had lived in the house with the family many months, but lately had become wild, and roved in the woods: however, there was no reason to entertain any suspicion of its suffering actual madness. The middle finger of the left hand, particularly the upper side, had received a deep and lacerated wound. The fore finger of the same hand was also injured,

and the whole of the backs of the left and right hands were slightly scratched, but whether by the teeth or claws of the animal could not be determined : this, however, is of no consequence, as the saliva of the enraged or rabid animal must have been generally diffused over the surface of the punctured parts.

Several large and deep incisions were very judiciously made in the direction of the wounds, agreeably to the practice and instructions of the ingenious Dr. Darwin, and spiritus terebinthinæ was liberally applied to them. The wounds healed, and the general health of the patient continued perfect till Friday, April 7. On that morning she walked to a neighbouring town, and from a window, in the house of a friend, beheld a mad dog, pursued by a concourse of people. She instantly and earnestly expressed a sense of surprise, terror, and alarm, returning home very anxious and dejected. The languor remained oppressive to her the whole of the day ; and in the afternoon she complained of an unusual stiffness and inability to move her left arm easily, and that its sense of feeling was remarkably impaired. She

expressed an aversion to company, and the least apparent distress of the family gave her exquisite solicitude. The irritations of noise, heat, and light, were offensive to her; she would not approach the fire, nor would permit a candle to be brought near to her. In the night these symptoms, particularly the insensibility of the left arm, were very distressing to her, and effectually prevented any composure to sleep.

In the morning of Saturday, April 8, and in the course of the day, the preceding symptoms became aggravated, and were accompanied with a sense of rigidity and coldness, beginning in the second joint of the middle finger of the left hand, which was chiefly injured, and ascending along the flexor muscles of that arm. These symptoms were at first imputed by the family to her having been lately almost constantly employed in sewing, which required an active exertion of the fore fingers of that hand. An acute pain was also felt, proceeding in the same direction, and terminating in the glands of the axilla, where she complained of a considerable swelling, extending to the

breast ; but no tumefaction, hardness, nor enlargement of the glands, could be discovered. Her breathing was sometimes interrupted by sighing, and she felt a painful sensation in her chest.

During the night the above symptoms became still more powerful, and at four in the morning (Sunday, April 9) she was seized with violent convulsive spasms, affecting the whole system, but chiefly the lungs. Respiration for some moments appeared to be totally suspended, occasioning her repeatedly and loudly to express an anxious wish for breath. These fits recurred every eight or ten minutes, and sometimes more frequently. They were violent in degree, but transient in duration. At four P.M. a propensity to vomiting took place. The nausea and retching were almost incessant, but ineffectual to accomplish actual vomiting till six. From that hour the discharges of grumous and bilious matter, sometimes mixed with blood, were frequent and painful.

I visited her at nine, and found her in a state of most imminent danger. She was perfectly collected, but the exquisitely painful irritations

she suffered excited a shrill and loud tone of voice. Her utterance, though distinct, was quicker than natural. The violent efforts of vomiting had considerably dilated but not distorted the features of her face, and their expression was remarkably languid. Since the vomiting had been encouraged the convulsions were weaker, and less frequent, in their recurrence.

When I entered the chamber she was drinking water-gruel, which she almost constantly requested, though it was immediately rejected. Her mode of swallowing it was neither easy nor natural. She appeared to open her throat widely, and greedily gulped down a very small quantity; the strong convulsive spasms preventing free deglutition, and perceptibly interrupting her breathing. I thought it proper to observe the effects of the clearest cold water taken from a large and transparent vessel. She took the glass goblet into her hand, appeared to withdraw herself a little reluctantly from it, but expressed no positive aversion to the fluid it contained, and drank of it, in the same manner as she had done the

turbid and brown mixture of oatmeal and water, the spasms recurring as before : the constant propensity to retching and vomiting was, however, allayed.

I examined very accurately the state of the fingers and hand of the left arm, and found them to appearance perfectly free from any effect of external injury. No discolouration, tension, nor tumefaction of the muscles of that arm, nor of the axillary glands, could be perceived ; yet a degree of lividity had been observed upon the lacerated part of the finger, but which disappeared when the symptoms of disease occurred. Pulse 132, quite distinct, but small, tense, and languid. Skin cool ; tongue moist ; thirst urgent ; bowels open. The vomiting continued during the night, and she drank a small portion of any article given her, but with the former convulsive interruptions. Not the least tendency to delirium prevailed.

A little before two in the morning (Monday, April 10), she earnestly and affectionately desired to take leave of the family, and said that she should not live longer than a quarter of an

hour. Her request was complied with, and soon after she calmly and happily expired. The duration of this disease did not exceed fifty-eight hours; and seventy-four days had elapsed from the time of receiving the injury till the first symptoms appeared.

With regard to medical assistance in this disease, the directions given by the original proprietors of the Ormskirk remedies were exactly complied with. The internal medicine was taken immediately, and repeated four days afterwards: the required external application was also made to the affected parts. On Saturday evening, the second day of the disease, twelve ounces of blood were taken from the arm, and the Tonquin preparation of cinnabar and musk was swallowed with considerable difficulty. By these means the symptoms were sensibly relieved, but their recurrence, soon after, was equally violent as before. When I saw her, the only indication which the aid of art could attempt to fulfil was that of allaying irritation in the general system, and of alleviating the distressful power of the

principal symptoms. The warm bath, or any partial employment of it, which the urgent spasms would permit, was first directed, and a cordial draught prescribed, with tinct. opii gtt. lxx. and sp. ammon. comp. gtt. xxx. Its repetition, and the increase or reduction of the opiate dose, could only be determined by the state of the symptoms. In compliance with the usual practice in such deplorable cases, strong mercurial frictions upon the legs and thighs were also employed, and a stimulant opiate plaster would have been applied externally to the throat, when the convulsive agitations were composed, and the inclination to violent vomiting had been allayed. A little before her death she very reluctantly, and with great difficulty, swallowed a small portion of the first draught.

The deplorable malady, whose progress and event have been briefly mentioned, I think cannot be imputed to a lacerated state of the nerves and tendons of the injured finger. If this had been the case, it would have occurred at an earlier period, and must have been attended by its characteristic symptom, a locked

jaw. The pain, ascending from the finger along the muscles of the left arm to the axilla, indicated the absorption and deposition of the rabid matter in the first lymphatic gland, directly connected with the affected parts. The interval from the time of imbibing the poison of rabid animals to the appearance of the symptoms of disease is very uncertain. Sometimes their attack is almost immediate, and violent; but generally thirty or forty days elapse before any suspicious circumstances arise. Instances are upon record where the patient has remained in perfect health for six months, or a much longer period. The causes which excite and bring into action the latent seminia of this disease are those which operate upon the nervous system. Hence it is highly probable that the surprise and terror which this patient suffered on Friday morning, might have occasioned the accession of the disease in the course of the afternoon of that day.

The states, or rather the degrees, of hydrophobia are very different. In some the patient cannot swallow the smallest portion of water, and rejects, even with horror, the glass which con-

tains it, or any article whose dark and polished surface resembles that fluid. In others, no positive aversion is expressed to the appearance of any common beverage; but the attempt to drink it is distinguished by the excitement of a strong convulsive spasm, extending from the throat to the organs of respiration, and from thence to the whole system: the reluctance of the patient arises from the consciousness of this painful difficulty in swallowing. The last noted state of disease exactly applies to that of Miss W.

Accurate dissection, in numerous cases, by the most eminent anatomists and surgeons, has afforded no satisfactory information relative to the cause, nature, or effects of this malady.

In respect to a disease, which, when completely formed, has always resisted the influence of every measure that the experience and judgment of the most sagacious ancient and modern practitioners could suggest, I shall not presume to offer any peculiar mode of treatment, but merely intimate a selection of the means generally approved.

The best, and perhaps the only, effectual expedient to prevent any future apprehension of danger is that of largely extending the wounds, and cutting out the whole of the parts connected with them. No time must be lost; and, if surgical assistance cannot be procured readily, an intrepid friend should employ a keen razor, or sharp knife, for that purpose. As a further security, the actual or potential cautery, viz. the application of a burning iron to the wounded parts, or that of a strong caustic, must be recommended. If the patient is averse to the former measure, the latter must be relied upon. Should both be rejected, cold water poured from an height for a considerable length of time might prove beneficial, alternating it with an affusion of warm water, or of any mucilaginous fluid. The application of kali purum to the enlarged wounds, or the explosion of gun-powder from them, has been advised; by which means the fatal acrimony of this peculiar poison may be destroyed, and a useful discharge excited; which can be afterwards promoted by stimulant mercurial dressings. Frictions,

with ungu. mercur. fort., are also proper, to occasion a moderate but constant determination to the salivary glands. Dr. Mead's pulvis antilyssus, Sir George Cobb's Tonquin preparation, or the still more celebrated Ormskirk medicine of Mr. Hill, have obtained high estimation, for their specific efficacy in the cure of this disease: but in the cases of recovery, where they were employed, it was very probable that the wounds had not been inflicted by a rabid animal; or that the poison had either not been imbibed; or, being diluted by the effusion of fluids, had become totally inert.

If the employment of these expedients, though trivial in themselves, can dissipate the fearful apprehensions of the patient, and inspire him with cheerful confidence, they ought to be allowed and encouraged; but always conditionally, that, at the same time, the means most efficacious should be assiduously prosecuted.

When the alarming symptoms of hydrophobia, or of excessive irritability, occur, the general languor and violent spasms will indi-

cate the use of opium, in a liquid form, as more immediately and certainly active; or in a solid one, if constant nausea or actual vomiting prevails. To this, our most powerful remedy, may be added æther, musk, volatile alkali, camphire, and perhaps foetids: but the separate or conjoined operation of these medicines can be possessed of no efficacy, either in mitigating the urgency of the present symptoms, or of preventing their fatal tendency, unless they are administered in very considerable doses. To prevent the attack, the frequent employment of cold bathing has been recommended immediately after the bite of the animal; and, in some cases, it was supposed to be most beneficial when the patient suffered an apprehension of danger, or had been hastily plunged from an eminence into the water. The convulsive irritations, which chiefly constitute the paroxysm, are allayed by the occasional use of the warm bath.

During a period of nearly half a century I have only had an opportunity to observe one other case of hydrophobia, which occurred when I was a student at Edinburgh. A

girl, aged eleven years, had been bitten in her right arm, by a mad dog, six weeks previous to the appearance of any symptom of disease. She had taken Dr. Mead's prophylactic medicine. No immediate attention had been paid to the wound. It was afterwards dressed with mercurial ointment, and a moderate state of perspiration had been promoted for a considerable length of time. Several symptoms of disease had occurred before she was admitted into the Clinical Ward of the Infirmary ; but of them no accurate information could be obtained. She was remitted to the highly judicious care of Dr. Cullen, on Dec. 1, 1765, one P.M., and the following was the train of symptoms which fatally terminated the disease in twenty-four hours.

She appeared remarkably timid and fearful, particularly of the application of any cold substance. She sighed often, and heavily : sometimes spoke rationally ; at others very incoherently : the transient convulsive twitchings which she suffered were most perceptible when she was placed in a recumbent posture ; and the attempt to carry any article to her mouth

was prevented by an involuntary motion, which instantly gave it a contrary direction : pulse frequent and irregular. She was constantly disposed to sleep, yet the pupils of her eyes were much dilated. Though she could not support the sight or even the mention of water, the appearance of a mirror, at first, was by no means offensive to her : afterwards she withdrew from it with great impetuosity.

At five P.M. nausea, retching, and vomiting, exceedingly distressed her : every medicine administered was instantly rejected ; and the symptoms in general were considerably aggravated.

At half past eleven the convulsions recurred more frequently and powerfully : the delirium was constant. She complained of great uneasiness in her throat, and the discharge of saliva, mixed with blood, was very abundant.

December 2, three A.M.—The delirium and vomiting continued violent ; and the flow of saliva was still more copious than before.

Four A.M.—The symptoms remained urgent as just described.

Half past five :—The convulsive contrac-

tions were less frequent ; but the delirious tendency continued, though she could sometimes reply sensibly to any question.

Half past six :—She was in a state of most profuse perspiration. Pulse calmer, but so languid and irregular as not to be numbered.

Seven :—More delirious, and apparently weaker ; but the spasms did not occur so frequently. The cold clammy moisture of the skin was chiefly confined to the upper parts of the body.

Half past eight :—General languor increasing. Her eyes were much contorted, and the pupils considerably dilated.

Nine :—Died, when the pupils contracted a little, but not to their natural size.

The professional attentions to this truly deplorable and hopeless case commenced with cauterizing the cicatrix of the wounded arm. The reputed curative efficacy of the volatile alkali in the bites of vipers was the motive of giving it a preference to any other internal medicine. Thirty grains of it, in a solid form, were taken in the space of two or three hours, with no apparent benefit. A reliance

upon musk and laudanum was equally fallacious. Ten grains of the former and fifteen drops of the latter were exhibited repeatedly; but, as the stomach scarcely retained them a moment, several glysters, containing forty drops of laudanum and twenty grains of musk, were injected, with considerable difficulty; the rapid progress of this fatal disease not being, in the least, interrupted.

From an accurate examination of the body after death, it appeared that the colour of its whole surface was remarkably brown, and that of the nails, with some parts of the arms, had assumed a livid hue. Within the cranium nothing extraordinary could be discovered. The choroid plexus was rather paler, and the superficial veins were a little distended with blood. The fauces, œsophagus, and parts adjacent, were in a natural state; but the effects of inflammation were apparent in the lungs. In the right auricle of the heart was found a large, soft, whitish, and loosely adhering polypus; and in the left ventricle a smaller substance, similar to a collection of inspissated blood. The stomach

contained a little mucus, and two round worms. Several portions of the larger intestines were contracted, and their coats a little thickened. The pancreas appeared redder than usual. All the other parts were perfectly natural.

ART. V.

REFLECTIONS ON THE INDISCRIMINATE USE OF
MERCURIAL PREPARATIONS IN MEDICINE.

By W. FALCONER, M.D. F. R. S.

In a Letter to Dr. LETTSOM, dated May 5, 1809.

Read May 8, 1809.

THE laws by which the functions of the animal system are regulated, those which direct the effects of disease, and those which guide the operations of medicines, are no doubt equally invariable with those which prevail in the other branches of natural philosophy. But even the latter, though explained on general principles, and on that account appearing to be more familiar to our understandings and conceptions, are nevertheless only partially developed, and we are still in many instances at a loss to determine the extent or the degree to which their operation is carried.

The powers and the effects of medicines are removed still farther from our capacity of examination.

The Father of Medicine seems to lament the inadequacy of the duration of life itself to

the attainment of a proficiency in the art, and adds that the opportunities of success are transient, experiments hazardous, and the inferences to be drawn from them difficult and uncertain; and Celsus, his follower, repeatedly, and from experience, pronounces medicine to be a conjectural art; a truth of which modern practitioners are often more sensible than they are disposed to acknowledge.

It might be expected that this uncertainty would produce diffidence and reserve both in speculation and practice; but the contrary appears to have taken place. Specific remedies, nostrums, and panaceas, were at no time in greater vogue than in those periods of darkness and ignorance, when the very meaning of the terms was scarcely understood. Even in this enlightened age (an appellation which the present race are more ready to assume than posterity will be to allow) the same impositions are as successfully practised as at any former time.

The promises of empirics comprehend in one advertisement, and by the efficacy of a single remedy, the cure of more diseases than

the united skill and recorded experience of all former ages have been able to accomplish ; and many of these wonderful cases are exhibited under the strongest apparent attestations of their authenticity, by persons whose rank and character only prove that such pre-eminence affords no security against prejudice and self-deceit.

The truth is, that doubt and uncertainty respecting the event are sensations so painful to our nature, that men are disposed to get rid at any rate of their anxiety, even by the sacrifice of their judgment and understanding ; and on finding men who regard conscience and moral character averse to giving the assurances of success which they require, they take refuge in promises of relief from those whose judgment on any less important occasion they would hold in the utmost contempt. The absurdity of implicit faith in the decision of beings of our own nature and rank in the line of creation is not confined to religion. Medicine affords numerous instances equally striking, and both perhaps produced by nearly the same cause. The miracles of the Romish

church and the instances of cure produced by empirics bear a strong resemblance to each other; and the practitioners of medicine in this branch have not much fallen short of their religious associates in the extraordinary instances of success which they exhibit.

The darkness in which this science is involved has produced effects not very dissimilar among those who profess to practise medicine on a more liberal and scientific footing. The fluctuations of opinion, and the various and discordant medical systems that have been obtruded on the world, have been so numerous, and both urged and supported so pertinaciously, as might almost tempt an unprejudiced observer to think that the speculations of philosophy and the information derived from experience formed only a chaos of materials which afforded little assistance towards the discovery of truth, and indeed tended rather to bewilder than to guide those who were endeavouring to explore the paths of science.

The consequence of this uncertainty has been, that men became either confirmed sceptics respecting the effects of remedies, or ran into

the other extreme of selecting peculiar articles, and ascribing to them, if not an indiscriminate efficacy, yet so extensive an use, as to supersede in a good measure their better judgment, founded on that difference of indications which difference of symptoms points out.

Among the favourite remedies which have been thus distinguished, opium, antimony, and mercury, are the principal. The first of these, opium, is well known to be of great and even indefinite antiquity; and, during the long period of our acquaintance with it, has been repeatedly and alternately proscribed as a poison and extolled as a panacea.

Antimony, though of later date, has suffered similar reverses of character. It has been the subject of even legal prohibition and commendation, as well as the favourite of empirics, from its first panegyrist Paracelsus to the present day. Mercury has likewise attracted the attention of mankind as a powerful agent in the list of the materia medica, and has been the occasion of as much discordancy of opinion respecting its use, as either of the two preceding articles. It is on the indiscriminate use of this powerful and active remedy

that I mean to speak. The effect of mercury in counteracting the power of the venereal virus is universally acknowledged; and whatever may be the pretences of quacks, physicians are now agreed that on the use of this alone the cure depends, and that it merits the title of a specific better than any other remedy with which we are yet acquainted.

This property naturally induced a trial of it on other occasions. But the success attending its use has not corresponded with the expectations of those who founded their hopes on its known effects in syphilis, and the analogies deduced from thence. Mercury, however inert in its crude state, is sufficiently active in its preparations. The forms of these have varied at different times, but the particular effects of mercury are visible in all. In whatsoever form it is administered it acts as a powerful and general stimulant, increasing the number of the pulse, and exciting the action both of the secretory and excretory vessels. Its effects, though sometimes general, are not unfrequently determined to particular organs. Thus it often acts as a purgative, sometimes as a diuretic, and sometimes, though less frequently, as a

diaphoretic. But its specific action seems to be exerted on the salivary glands, to which it appears to have a peculiar determination, whether on account of the ammoniacal salt contained in the saliva, with which mercury is supposed to be particularly disposed to unite, or from some other cause, I cannot form any conjecture. The fact, however, that mercury, in whatever mode administered, is disposed to accumulate in the salivary glands, is evident not only from the local swelling and inflammation which it occasions in those parts, but by the brassy taste it produces in the mouth, and which is peculiar to the active preparations of this metal. From the above effects, and the quality which it certainly possesses of almost universally pervading the animal system, mercury has, and not without plausible reasons, been accounted a general deobstruent; a term, however, of indefinite application, though apparently easy to be conceived. It seems to have had this quality ascribed to it, in the early ages of its employment, from its superior specific gravity to other fluids, by which it was supposed to be enabled to force its way through resistance which lighter fluids were not able to

overcome. This we know was the foundation of its use in the ileus, and some writers had transferred the same notion to its operation on the system at large. But though this reasoning has been long proved to be absurd and frivolous, the character of a deobstruent still continued attached to the medicine, and this supposed effect is in a good degree the foundation of its use in practice to this present day.

But it may justly be doubted whether, in most of the instances in which we have the greatest reason to suspect obstruction to have taken place, as in glandular swellings, the stimulant and inflammatory qualities of mercury are not more likely to lay the foundation of obstruction than to remove it. We know that it inflames, and, to all appearance, causes at least a temporary obstruction, in the salivary glands; and that in the scrophula, which exhibits the most evident marks of glandular obstruction, the use of mercury has been found not only unserviceable, but highly prejudicial.

A state of indisposition, marked by a pale leaden-coloured countenance, defect of appetite, paucity of urine, and a sense of weight

rather than of pain in the abdomen, accompanied with low spirits; a pulse sometimes rather slower than ordinary, but generally irregular in this respect; and often a dry but not harsh or corrugated skin, and a degree of animal heat rather below than above the natural standard; frequently occurs among those who resort to the Bath waters for relief.

This disease is generally ascribed, how truly I cannot say, to mesenteric obstruction; and the hardness of the abdomen, which sometimes accompanies the other symptoms, seems to countenance this opinion. But this hardness is often very variable, particularly in women, and though at times evident, is at others scarcely perceivable. Such cases are sometimes relieved by the use of the Bath waters, especially in female subjects, but I fear the failures are pretty numerous. These instances, however, afford an ample field for the trial of mercurial preparations, especially calomel, which in these as in most other obscure chronic complaints, where no specific indication is suggested, is usually plentifully administered; in a good measure, it must be owned, on an empirical footing. The symptoms above describ-

ed afford but too much reason to suspect scirrhus of some of the viscera, and the ill effects of mercurials in all cases that partake of a cancerous nature are but too well known. If scirrhi of this kind are but of small extent and indolent, they may often by a cool regimen, a milk diet, some assistance afforded to the general health, and a quiet manner of life, by avoiding extremes of temperature and other causes of irritation, be kept from spreading, and contributing much either to embitter or to shorten life. But the administration of mercurials, of all which calomel may in the present age be regarded as the representative, is too apt to rouse the slumbering malady into an active inflammatory state, from the consequences of which few escape, and those few only by such efforts of nature as we have no right to expect, and know not how to promote or to imitate.

In cases of decided hepatitis the bad effects of calomel are still more evident. I had the mortification of witnessing, many years ago, a melancholy scene of this kind in my attendance on a professional gentleman of eminence

in this city. The local uneasiness, distention, and soreness of the hepatic region, the presence of fever, and the great degree of jaundice that accompanied it, marked beyond a doubt the nature of his disease, of which he indeed was as sensible as his attending friends. Unfortunately, he had, from the first symptoms of its appearance, entertained a strong prepossession that mercury was the only remedy that could afford him any material assistance, and had in consequence of this persuasion employed other evacuations very sparingly during the space of three days before I saw him. On my visiting him, I advised a more liberal use of the lancet, a blister to the part nearest to the seat of the pain, and cooling purgatives, particularly clysters; with none of which, a small bleeding of four ounces excepted, he complied, but pursued the very exceptionable method he had before followed, of taking calomel to the quantity of four grains twice or thrice daily, which practice he could not be persuaded to forbear by the joint advice and solicitation of two eminent practitioners whom I requested might be called. The consequences of almost

every dose of calomel were distinctly marked by an increase of the fever, pain, and other signs of local inflammation, and particularly by the increase of the jaundice, which was at last excited to such a pitch, that his perspiration, stained the sheets he lay on with a deep tinge of a lemon colour. I need hardly add the account of the unfortunate termination of the disease, which it was manifest to the other physicians, as well as to myself, was greatly aggravated by the repeated doses of mercury which had been swallowed.

Mercurial purgatives are usually administered in simple obstructions of the gall ducts, which often occur without any disease whatsoever of the liver itself. But there appears no reason for this preference; and, indeed, there is cause to think that such a choice is not only unnecessary but improper. Calomel has no specific power in dislodging a biliary calculus; and the preference, as Dr. Heberden observes, “if a course of purging be thought necessary, should be given to those purgatives which act with most ease, and may be continued with the greatest safety; qualities which

“ belong more to the purging mineral waters,
“ and to sea water, than they do to calomel.”

But the largest consumption of calomel takes place in those complaints which have gained the appellation of bilious, merely because their symptoms afford no clear marks of distinction of the nature of the disease. This term has nearly superseded that of nervous, which was equally indefinite, and generally denoted that the practitioner had no other appellation to bestow upon it than such a general term as might comprehend three fourths of the maladies that afflict the human race. But, unfortunately, the term bilious, however little information it may convey respecting the nature of the disease, is supposed, nevertheless, to point out the method of treatment. Dr. Heberden observes, very truly, that “ wherever the bile is judged to be the
“ cause of any disorder, there other medicines
“ are laid aside, repeated purgings are directed
“ in delicate and weak constitutions, in hypo-
“ chondriac and hysteric affections, in low
“ fevers, in persons exhausted with chronical
“ illnesses, and in other cases in which, upon

“ all other accounts, this evacuation would be highly improper.”

This experienced and judicious physician here glances at a practice which was commencing when he wrote the above observations, but had not then reached the pitch of extravagance to which it has since attained. Complaints of an obscure nature are denominated bilious, on a strange and even contradictory supposition that they proceed from either a deficiency or redundancy of bile, or from its depraved or corrupted state; though no marks of any of these faults appear, either in the colour of the skin, or the colour, quantity, or other qualities of the evacuations. It would have been fortunate for mankind if the practitioners of medicine had done in the present age as Dr. Swift satirically describes them to have done in his time, and, for the cure of these imaginary diseases, to have invented imaginary remedies. But, unfortunately, giants have been brought on the stage to combat pigmies, or rather shadows. Every dabbler in medicine prescribes calomel as freely, and on the most trifling occasions, as he

would the most insignificant article in his shop ; and this active, and in many instances dangerous, article is employed oftener, I believe, to the destruction than to the preservation of mankind. I might cite all the writers on the materia medica for authorities, that the long continued and frequent use of mercury is not free from danger ; that, among other ill effects, it tends to produce tremors and paralysis, and not unfrequently incurable mania. But I have myself seen repeatedly from this cause a kind of approximation to these maladies that embittered life to such a degree, by the shocking depression of spirits, and other nervous agitations with which it was accompanied, as to make it more than commonly probable that many of the suicides which disgrace our country were occasioned by the intolerable feelings that result from such a state of the nervous system. The repeated use of calomel in the complaints usually styled bilious, tends to make its continuance in a manner necessary.

The frequent use of mercury weakens the powers of the organs of digestion in such a

manner, as often to cause considerable accumulation in the bowels of what should be discharged. To relieve the uneasiness which this occasions, purgatives become necessary, and the one which gave rise to the complaint is usually selected in preference ; which affords, indeed, a temporary abatement of the uneasiness, but as certainly increases the disease. I have seen the most distressful cases under such circumstances, where the unfortunate sufferers were so attached to what they had adopted as a remedy, as to be with difficulty persuaded to make trial of other less exceptionable means to answer the same purpose.

Mercurial preparations have been much in use, both internally and externally, for the cure of cutaneous eruptions, and particularly the one denominated lepra. As many persons so affected apply to these waters for relief, I have had frequent opportunities, particularly at the Bath Hospital, of observing what regarded the lepra. I suppose mercurial preparations were formerly held in esteem among the professional persons that attended the Bath Hospital, as there was in the pharmacopœia

of that institution a mercurial preparation with the rather pompous title of *guttæ ad lepram*, which I remember to have been frequently in use in obstinate cases, such as sometimes, though not often, resist the efficacy of warm bathing. I cannot however say that I ever saw this medicine of service towards the cure, though some thought it useful in promoting the separation of the leprous crusts. But I never observed it to have any effect of this kind in any case that had not previously yielded in some degree to the warm bath; so that its efficacy in this way was very doubtful.

Instances of the ill effects even of the external application of mercury are sometimes found in the use of what are called quicksilver girdles, which are often worn for the itch, especially by females of the lower rank, as being cleanlier and more free from fœtor than a sulphureous application. Many of these cases have been admitted into the Bath Hospital. The general symptoms were a degree of general weakness approaching to palsy, great pain and tremor in the limbs, and often violent head-ach. It is worth remarking, that an instance lately

occurred in the Bath Hospital of the symptoms that distinguish the poison of lead, particularly the loss of tone in the muscles of the wrists, appearing in consequence of the use of a mercurial ointment for the itch. Something of this kind had been noticed in Sir George Baker's excellent Dissertations; but it seems doubtful if he understood that such symptoms had taken place from the external application of that mineral. As mercury is well known to pervade the skin, it is possible it might introduce the poison of lead, with which metal it is often adulterated, into the system, which without such a conductor would not have found its way.

I cannot quit this subject without remonstrating in the strongest manner against the too frequent practice of administering on common occasions calomel to young children. It has been found, when largely given, to weaken, and even to disorder, the mental as well as the corporeal faculties of grown-up persons; and the use of it at an early age, when the faculties of either body or mind have not acquired strength and firmness, may

both impair the bodily health and debilitate the mental energy of persons who might, but for such imprudent interference, have distinguished themselves when further advanced in life.

I might cite, from good authority, many more instances of the bad effects of the indiscriminate use of mercury; but what I have related has occurred to my own observation, and as such only I offer them to the consideration of the public at large, and especially to persons in the profession of medicine.

ART. VI.

ON THE STAPHYLOMA, HYDROPHTHALMIA, AND
CARCINOMA OF THE EYE.

By JAMES WARE, Esq., F.R.S., and Vice President of the Medical
Society.

Read May 28, 1810.

ALTHOUGH it be too often the melancholy province of medical men to witness disorders which cannot be removed, and in the treatment of which the utmost exertions of their art can only produce a mitigation of the symptoms, surgery nevertheless, besides affording in this way considerable benefit to mankind, is often highly serviceable in various diseases, by preventing the occurrence of greater evils than those which have already taken place. This observation is strikingly exemplified in those disorders of the eye to which the attention of the Society is now requested; for though all of them have irrecoverably destroyed vision, yet the staphyloma and hydrophthalmia indispensibly require an operation that shall cause the eye to sink in the orbit, in order to obviate constant pain

and uneasiness ; and the carcinoma of the eye is only capable of receiving a check, in its tendency to destroy life, by the complete extirpation of that organ.

The term staphyloma is sometimes used to designate the protrusion of a part of the iris through a wound or ulcer of the cornea. This is perhaps its most correct meaning, the Greek word, from which it is derived, implying similitude to a raisin or dried grape. But various authors have also used the term to denote a projecting opaque cornea ; and in this sense I propose more particularly to employ it at this time. When the projection is very considerable, the disorder is sometimes also called proptosis ; and in those cases where the projection is not confined to the cornea, but occupies also a portion of the sclerotica, as sometimes happens, this latter appellation is peculiarly appropriate.

It has been disputed by authors whether the projection of the opaque cornea, in the staphyloma, is occasioned by a thickening of this tunic, or by a morbid accumulation of aqueous humour behind it. I believe, in

general, both these circumstances combine to produce the disorder; the cornea becoming not only opaque, but both softer and thicker than in its natural texture; and, in consequence of this, the aqueous humour behind the cornea pushes it forward, and thus enlarges the anterior chamber of this humour. I have sometimes seen the whole cornea sloughed off during an acute purulent ophthalmia, and a white opaque substance gradually effused from the ulcerated surface, sufficient to form a complete cover to the iris; after which this opaque body has gradually projected in a conical shape, until at length it has become so prominent as to hinder the eyelids from closing over it. I have at other times seen the projecting cornea partly opaque, and partly transparent; the pupil being distinctly visible through the transparent part, but the power of vision wholly destroyed. Sometimes the circumference of the opaque cornea projects, its central part appearing depressed, and resembling the bottom of a plate or dish; and sometimes, near to the center of the opacity, in the case last mentioned, there is an irregular

black appearance, which a cursory observer might mistake for a pupil. No part of this aperture, however, is perceptible on a careful inspection, and the eye of course is deprived of all useful vision*.

* The cornea not unfrequently projects without losing its transparency, assuming a conical shape instead of that which is spherical; in consequence of which change the eye at first becomes myopic; but when the projection is more advanced, it causes so unequal a refraction in the rays of light as to destroy correct vision. In cases of this description I have repeatedly discharged the aqueous humour, and endeavoured afterwards, by moderate pressure, to prevent the return of the projection; but on the reproduction of the aqueous humour the conical projection has always reappeared. If only one eye be thus affected, the sight of the other remaining perfect, all the purposes of vision will be obtained from this alone; but, if the cornea of both eyes be conical, much advantage may be obtained from wearing spectacles, the rings of which are filled with an opaque substance that has a small hole in its center, not more than the tenth or twelfth part of an inch in diameter, the smallness of which aperture, by lessening the pencils of the rays of light, will prevent the confusion that must otherwise be occasioned by their unequal refraction. Persons who have a projecting cornea should be particularly careful to avoid blows on the eye; since the projection is usually accompanied with a preternatural thinness of this tunic, which renders it easily ruptured: when this happens, the iris is liable to be involved in the wound, and the sight to be more or less injured by the derangement that takes place in the figure and size of the pupil.

So long as the projection of the opaque cornea can be covered by the eyelids without painfully stretching them, if it be not accompanied with an irregularity in the surface of the cornea, and the sight of the other eye continue perfect, the only inconvenience the projection occasions is produced by the unseemly appearance it presents to observers. This may in some degree be prevented by wearing a pair of spectacles containing plain window glass in the ring opposite the sound eye, and glass that is ground in a slight degree opaque, or even similar plain window glass, in the ring opposite the affected eye. In some instances, however, a consciousness of the appearance produced by a projecting opaque cornea has occasioned so much distress of mind, that I have been requested to sink the eye, solely for the purpose of getting rid of the deformity. I wish I could say that milder means have been found sufficient to accomplish the object. Various applications have been proposed for this purpose at different times by different authors. By some, strong caustics have been recommended for

the express purpose of producing an excoriation, and even an ulceration, on the surface of the projecting substance. Both *Janin and † Richter have said that they not only removed the projection of an opaque cornea, but even reproduced its transparency, by the application of the butter of antimony. Janin has recommended this application, for the purpose also of removing that other species of the staphyloma, in which there is a protrusion of part of the iris through an ulcer of the cornea. But I beg leave to observe that caustic applications of every kind should be used with great caution in all diseases of the eye. I have known them occasion violent and long continued inflammations; and, so far from reproducing vision, they have very rarely reduced the prominence of the staphyloma so as to preclude the need of other means to take away the deformity. Scarpa, in his chapter on the staphyloma, expresses himself in a similar way; and has adduced several cases of this disorder in children, in whom an ulceration on the

* Janin sur l'œil, sect. 8, page 389 et sequent.

† Richter, fasciculus 2, page 105 et sequent.

surface of the cornea was kept up by escharotic applications several weeks, and yet no diminution was obtained by it, either in the projection or opacity. If such be the result of the experiment on the eyes of children, it certainly is less likely to succeed on those of adults. The other mode which has been proposed by authors, viz. that of compressing the tumor, and thus restraining it from interfering with the motion of the eyelids, is so difficult to be accomplished, with the necessary accuracy, that I remember only one case in which it afforded any advantage. In this instance a poor man who had a staphyloma of one eye many years, and could not be prevailed on to submit to have the eye sunk, was kept easy by wearing a bandage round his head, not unlike to the spring truss that is used for an inguinal hernia. The bolster of the instrument made a pressure on the outside of the eyelids, which kept them constantly closed, and hindered the eye from moving. In consequence of this, the projection gave no pain; and, by the aid of the other eye, the patient was enabled to work

at a common handicraft business without inconvenience.

The more direct way of affording relief in the staphyloma is by removing the whole of the projecting substance; in consequence of which the humours of the eye are discharged, and the posterior part of its tunics collapse, so as to form a kind of button at the bottom of the orbit. On this button, when the wound is healed, an artificial enamelled eye is capable of resting; by which the uniform appearance of the face may be restored. Authors are not agreed on the best mode of performing the operation: Heister, St. Yves, and others, have proposed to pass a double ligature through the middle of the tumor, and then to separate the threads, and tie the tumor on each side, so that the compression made by the ligature may cause it to mortify and slough off. But this is so painful, and so indirect a mode of accomplishing the object, that I believe it has not been practised for many years. Scarpa, in more modern times, has recommended to us to remove a small portion only of the projecting cornea (agreeable to a mode first proposed by

Celsus in his book *de medicina*, lib. vii, cap. 7*), and to force out the crystalline and vitreous humours through the opening; after which, he says, the wound will close, and the tunics of the eye collapse to a small size, without occasioning any considerable degree either of pain or inflammation. This mode of performing the operation appears to me, however, to be liable to considerable objections. If the opening in the cornea be not larger than the size of the crystalline humour (which not unfrequently, in cases of the staphyloma, is without disease), this humour, in passing through the aperture, is very liable to bruise the iris, and to bring on pain and inflammation, that are both violent and tedious; and if, on the contrary, the opening be so large as to allow the crystalline and vitreous humours to be discharged, without doing

*The words of Celsus are, “*in summa parte ejus ad lentikulæ magnitudinem excindere.*” Scarpa proposes to make an opening “two, three, or four lines in diameter, according to the size of the “staphyloma;” but the largest of these dimensions being only one third of an inch, is barely sufficient to allow the crystalline to come through it, without forcibly compressing the iris.

violence to the iris, though the pain and inflammation, consequent on the operation, may not be considerable, yet the place of the evacuated humours will be supplied by a watery humour, which will speedily distend the tunics of the eye to their former size, will do away the possibility of inserting an artificial eye, and will hazard the return of all the old symptoms. Scarpa, aware of these circumstances, mentions expressly, that he has been obliged to irritate the wound three or four different times, after the operation, in order to bring on a sufficient degree of inflammation to cause the eye to collapse. Influenced by these considerations, I have never performed the operation according to this method; and having uniformly succeeded in a considerable number of cases, during a practice of more than thirty years, by performing it in the following manner, I trust that I am justified in recommending my mode of operating to the attention of this Society.

The operator will find it more convenient to stand behind the patient than before him; and the patient should be placed on a chair

sufficiently low to allow the operator to carry his hand with ease over the patient's head. A large crooked needle, armed with a strong thread, should then be passed through the opaque projecting cornea, and, after separating the needle from the thread, a knot should be tied in the latter, at a small distance from the eye, in order to hinder the thread from slipping. The operator having thus obtained by means of the thread a secure hold of the eye, a knife similar to that which is used to divide the cornea in extracting the cataract, or, if this be not at hand, a long sharp-pointed lancet, should be pushed through the sclerotic coat, about a quarter of an inch from its connection with the cornea, and be carried quickly but accurately round the cornea, as nearly parallel to it as can be accomplished. Sometimes, as soon as a puncture is made through the sclerotic, so large a portion of the vitreous humour escapes, as to cause the cornea to become flaccid; in consequence of which the operator may find it difficult to complete the incision round this tunic with either the lancet or the knife: and in this case a curved blunt-pointed

scissars will be found useful to finish the operation. The only objection to the use of the scissars is drawn from the additional pain which it is supposed to give; but the duration of the operation is so short, that the difference between the pain produced by the instruments is scarcely worthy to be named. The hæmorrhage that succeeds is seldom considerable; and the less the eye is examined afterwards, the less danger will there be of pain and inflammation. A compress wet with a saturnine lotion should be applied over the eye, and it should be moistened with this liquor, without being removed, as often as it becomes dry; but no lint or any other application should be put within the lids, since this has been known to give great pain, and in one instance to occasion alarming symptoms. An anodyne should be given after the operation, of greater or less strength according to the age of the patient; but it is seldom necessary to repeat this medicine, since the patient has usually more sound and quiet sleep after the operation than he had for a long time previous to its performance. At the end of about a

fortnight that part of the sclerotica which remained in the orbit will be found to have collapsed; and sometimes a small fungous substance will then protrude through the wound. This in the course of time would subside of itself, but, as the delay may be irksome, the fungus may be easily removed, and with very little pain, by snipping it off with a pair of sharp scissars. The fungus is usually smaller in its neck where it joins the sclerotica than in its top; in consequence of which its removal is effected with very little difficulty; and though it sometimes reappears, it may be snipped off, again and again, until at length the wound will completely close, the inflammation cease, and the orbit become fit to receive an artificial eye. This, however, ought not to be introduced until the inflammation be perfectly removed; and when such an eye is used, it is advisable to withdraw it every night and replace it in the morning, which may be effected with ease by the patient himself, after a short experience. In the choice of the artificial eye, it is not only important that the colour of the iris resemble accurate-

ly that of the sound eye, but the size of the eye should be well adapted to that of the orbit, and the dimensions of the cornea be rather smaller than that of the natural eye. If these rules be not regarded, the artificial eye will give an unsightly stare to the countenance; it will not move, as it ought to do, in unison with the sound eye; and it will be liable to occasion both pain and inflammation. It is of consequence also to know that an artificial eye is apt to irritate after it has been used about a year and a half or two years, and must then be either disused entirely, or its place be supplied by a new one: and it may not be improper to remark, that when an eye has been sunk, if an artificial eye be not introduced, the appearance of the countenance may be much improved by wearing a pair of spectacles with either plain window glass in the circles, or glass that is tinged in a slight manner with a green or blue colour. The reflexion from the glass in the spectacle frame will prevent the deficiency from being noticed, or will only give rise to the supposition of the eye being weak.

I next proceed to consider the disorder called Hydrophthalmia. By this term authors do not in general mean an accumulation merely of the aqueous humour, but so great an enlargement of the whole eye, produced by an increase of the vitreous humour as well as the aqueous, as to cause the eye to occupy an undue portion of the orbit, and to occasion difficulty and pain when the eyelids are closed over it. Thus defined, it may perhaps with more propriety be denominated Exophthalmia than Hydrophthalmia.* In describing this

* Scarpa is of opinion that an accumulation of water between the choroid coat and retina is a common cause of the hydrophthalmia, and he minutely describes a case of this kind which occurred in a child three years and a half old, in which the eye was a third larger than its natural size, the cornea partaking of the increase, in the same proportion as the sclerotica. I have several times observed, on dissecting the eye after death, that there has been an effused fluid between the choroid coat and retina, the vitreous humour being wholly absorbed, and the retina collapsed into a cylindrical, or rather a conical, chord-like substance, its apex arising from the optic nerve, and its basis surrounding the crystalline humour; but, though this effusion had produced a fixed dilatation of the pupil, an opacity of the crystalline, and sometimes a violent deep seated pain in the eye, I have never known it to occasion an enlargement of this organ.

disorder a greater discrimination is required than seemed necessary in the former part of this paper. In the staphyloma, for instance, the opaque projecting cornea designates the nature of the disorder in so plain a manner, that it seems impossible to make a mistake with regard to its nature. But in the hydrophthalmia, which implies an universal enlargement of the eye, some examination is requisite in order to ascertain what occasions the enlargement; whether there be an equal enlargement of all the different parts of the eye; a morbid enlargement of one particular part only; the formation of an adventitious body within the eye; or a projection of the eye in consequence of a substance formed behind it.

Infants are sometimes born with eyes remarkably large and prominent. But if they do not give pain by their pressure, nor interfere with the free motion of the eyelids, and if at the same time the cornea be transparent and the sight perfect, the mere circumstance of their prominence does not call for any particular attention. Sometimes, however, the

eyes of infants, at the time of their birth, are not only remarkably prominent, but the cornea of one or both is universally opaque, without any accompanying inflammation in the conjunctiva, or any morbid discharge from the eyes. Of this I have seen several instances, three of which happened in one family. These were more directly under the care of Mr. Farrer, a surgeon, resident at that time at Deptford. He has described them with accuracy in the second volume of *Medical Communications*, page 463, published in London in 1790. The opacity gradually diminished; and in less than a year, in two of them, it was quite removed. In the third the cornea did not resume its transparency until the end of the second year. The amendment in these instances cannot be attributed to any particular remedies, since none were used; but it was owing to the *vis naturæ medicatrix*, which in infants, in this disorder, as it also is in many others, is often effectual to restore a healthy state. Mr. Farrer does not mention any particular prominence in the eyes of these children; but, having seen two of them

shortly after the time when Mr. Farrer drew up the account of the cases, I find, by a minute I then made, that the cornea appeared to me remarkably prominent; and that, though the children had recovered a distinct vision, they were all short sighted.—Another case of a similar kind came under my notice about three years ago, in the new born infant of a respectable farmer in Essex. Both corneæ were completely opaque, and both were large and prominent. In this instance, as in those last mentioned, no applications were used with sufficient steadiness to allow me to attribute any considerable degree of efficacy to them; notwithstanding which, when, about four months ago, the child was again brought to me, I had the satisfaction to see the left cornea sufficiently clear to allow the perception of all large objects; the opacity of the right cornea being also diminished round its outer edge, though the greatest part of the pupil was still obscured. I was consulted in a fifth case of the same kind about a year ago. It occurred in the infant of a gentleman in Portman Square. Here, as in the other instances, the corneæ of

both eyes, at the time of birth, were large and prominent, and they were at the same time completely opaque; the child, in other respects, being healthy, and suffering no pain from the state of the eyes. Sanctioned by the successful issue of the preceding cases, no particular remedies were employed; and at the time of my writing this paragraph, which is just a year from the birth of the child, the cornea of one eye is not only perfectly transparent for a considerable space round its circumference, but the pupil can be seen through the diminished opacity that remains in its center; and though the cornea of the other eye has improved less in its appearance, the transparency of this also is evidently increased, and the iris is visible through it, for the space of a line at least round its rim.

In all these instances, the enlargement of the eye was not sufficient to be of serious consequence independent of the opacity of the cornea; and, when this opacity was dissipated, the power of vision was restored. But when, on the contrary, the enlargement is not confined to the cornea, but extends to the sclerotica, and

is so considerable that the eyelids cannot be closed without difficulty, the patient being not only blind, but unable to sleep without the aid of opiates; the prospect of restoring sight is wholly lost, and the only question is, in what way ease may be obtained, and deformity obviated. It does not appear possible to do more than this; nor can even this be accomplished by any other mode than that of diminishing the size of the eye: and the best manner of doing it I believe to be by means of the operation, which has been recommended above in cases of the staphyloma.

Before an operation of so much importance be performed, it is, however, essentially requisite to ascertain that the disease consists solely in an enlargement of the different parts of the eye; and that it is not produced by the formation of purulent matter within the eye; by a morbid alteration in the structure of either its coats or humours; nor by the undue accumulation of adeps, or of any other substance, behind this organ.

When purulent matter is accumulated within the eye, the inflammation and pain, which

both precede and accompany the enlargement, seem fully sufficient to distinguish the peculiar nature of the disorder; and they at the same time point out the necessity of procuring an adequate aperture in the tunics of the eye, through which the matter may be discharged. In a case of this kind, which I was desired to see at a small distance from London, in which a young lady, nine years of age, had suffered agonizing pain several days, the sight of the eye having been lost many years, and the cornea being both opaque and prominent, an aperture had taken place spontaneously on the side of the eye next the temple, just in that part where the cornea is joined to the sclerotica, and through it a small portion of matter had escaped; but the tension of the eye continued, and the wound was only large enough to admit the blunt end of a probe. The propriety of enlarging the aperture naturally suggested itself; and as the eye had not been useful for a long time as an organ of vision, a small blunt-pointed bistoury was immediately introduced through the wound, to the depth of at least a quarter of an inch, and the incision

was carried three quarters of an inch in a direction towards the temple, dividing at the same time the sclerotica choroides and retina, and making a large opening into the body of the vitreous humour. No part of this humour, however, nor any sort of fluid, issued through the wound at the time of the operation. The eyelids were immediately closed, without any pressure being made on the eye, and directions were given to apply an anodyne fomentation, in the same way in which it had been frequently before used. An anodyne draught was intended to be given, but within half an hour the patient fell into a sound sleep, which lasted several hours. She awoke much refreshed and perfectly easy. The wound discharged more or less of matter for a fortnight; the pain did not return; and the eye gradually diminished, so that in a short time it did not appear to be more than one half of its natural size.

Purulent matter is sometimes also formed behind the eye in the adipose substance that supports this organ in the orbit. If the supuration be quick in its progress, and be not

situated deep, the fluctuation of the matter may be easily felt, and the propriety of discharging it be determined at once ; but if, as I have occasionally found, the suppuration be slow, and the matter lie considerably below the surface, the eye will be protruded before any fluctuation can be discovered ; and the existence of the matter will only be learned by paying attention to the accompanying symptoms, such as a quick pulse, white tongue, shiverings, &c. In a case of this kind, which occurred in a child six years old, which was attended also by Mr. Hill in Bedford Row, I passed a lancet, on the side of the eye next the nose, a little below the commissure of the eyelids, at least an inch into the orbit, before I reached the matter. On withdrawing the instrument its point was evidently marked with pus. I therefore enlarged the aperture with a blunt-pointed bistoury, and discharged a considerable quantity, which was thick and putrid. It was necessary to preserve the opening by the insertion of a small dossil of lint ; on the removal of which, a vent was given daily

to new matter, for a fortnight. Its quantity gradually decreased, together with the prominence of the eye; and at length it wholly ceased, the wound healed, and the child became well. The motion of the affected eye, however, was not quite free toward the nose for several months afterwards.

Encysted tumors are sometimes also found in the adipose substance that supports the eye. A melancholy instance of this kind came under my notice a short time ago. The tumor was first perceived between the orbital process of the os frontis and the globe of the eye, and it gradually increased in size. An attempt had been made to extirpate it; but the greater part was situated so deep, that it was not possible wholly to remove it; and, after a short period, it reappeared, and in a few months completely pushed the eye out of the orbit; after which vision was destroyed, and the eye and the tumor became so blended, as to render it impossible to distinguish one from the other. The united mass increased continually in size, until, before the child's death, it was literally

larger than his head*. Another case of this kind came under my care, about the same time, in a girl about five years of age, who was a patient of Mr. Drew in Gower Street. The tumor had been perceived several months, and, when I first saw it, projected under the upper and outer edge of the orbit, and began to push the eye out of its place. In this instance I made an incision through the eyelid, parallel to the edge of the orbit, sufficiently deep to expose the whole of the fore part of the cyst. I then separated the cyst from the orbit, and, embracing it with a hook, drew it forward, and, dissecting it from all its attachments, brought it away entire. The sides of the wound were afterwards kept together by the use of adhesive plaster, and the cure completed in a few days.

In some instances, again, a projection of the eye appears to be occasioned solely by a morbid accumulation of the substance on which the eye rests in the orbit. The repeated application of leeches, on the temple and fore-

* I presume that this may be considered a case of fungus hæmatodes; though it originated in an encysted tumor situated between the bony orbit and globe of the eye, and did not affect the sight until the eye was thrust out of the orbit.

head, has been found of great use in subduing this morbid tendency. In one case, that came under my own care, the projection was speedily diminished by opening the temporal artery ; and, after the hæmorrhage had ceased, by converting the orifice into an issue, the discharge from which became soon very considerable. In another case, in which the protrusion occasioned great pain, and nearly destroyed vision, a perfect cure was accomplished by the application of a large caustic behind the ear. The discharge which it occasioned, when the eschar separated, was profuse ; and it was kept up, nearly a month, by the insertion of a dozen peas daily.

Another disorder of the eye, which gradually occasions its enlargement, has by some been called fungus hæmatodes ; and by others medullary sarcoma, spongoid inflammation, and soft cancer. This differs so much, both in progress and appearance, from the hydrophthalmia, that it cannot easily be mistaken for it. It more nearly resembles the disorder which I proposed to consider last in this paper, the Carcinoma of the eye, having many symptoms in common with it. The fungus hæ-

matodes seldom attacks the eyes of adults, and is most commonly discovered at an early period of an infant's life. The first symptom that is noticed is a white shining substance in the posterior part of the eye, visible through the pupil in some particular positions of the head, but not in all. One eye is generally attacked some time before it appears in the other. As soon as the whiteness is perceived in the eye, the sight is impaired, and, in a short time, it is wholly lost. At its commencement it bears a slight resemblance to a cataract; but an attentive person will at once discover the difference between the two disorders; the opacity in the cataract lying close behind the pupil, whilst in the fungus hæmatodes it is situated deep in the posterior part of the eye. In the cataract, the pupil retains the power of dilating and contracting in different degrees of light; but in the fungus hæmatodes the pupil never varies its size, and is usually dilated. When the disorder has so much advanced as to destroy the figure of the eye, and to make it protrude beyond the rim of the orbit, it is more difficult to distinguish

it from what has usually been called a carcinoma of this organ. There is still greater difficulty, when, after extracting an eye that contains a fungus hæmatodes, a fresh tumor arises from the bottom of the orbit, which fills this cavity, and continues increasing, until it becomes, as has sometimes happened, as large as the whole head. This difficulty of distinguishing between the carcinoma of the eye and the fungus hæmatodes is, however, the less to be regretted, since the proper treatment of both disorders seems nearly alike; the only known mode of checking the progress, in both, appearing to be the complete extirpation of every part that is diseased. Before recourse be had to the operation, it is necessary to ascertain, as far as possible, that every such part is capable of being removed; since, in both disorders, if the smallest portion that has been contaminated remain, whether it join the organ that is extirpated, or be at a distance from it, the diseased part will infallibly increase, and all the old symptoms be reproduced. The fungus hæmatodes is not always confined to one eye, nor even to both, but sometimes oc-

cupies a large portion of the orbit exterior to the tunics of the eye. It is also accompanied not unfrequently with abscesses and tumors in different parts of the head ; sometimes between the pericranium and cranium ; and at other times between the cranium and dura mater. These abscesses are not confined to the fore part of the head, having sometimes been found both on the outside and inside of the os occipitis. Distinct portions of matter, and sometimes hard tumors, have also been formed in the dura mater, and even in the substance of the cerebrum ; and sometimes under the anterior lobes of the cerebrum, making a compression on the thalami nervorum opticorum. A disease of this kind is by no means new. It has occasionally come under my notice ever since I was a boy, and it has been described by many of our ancestors under the common name of carcinoma or cancer. It may be more correct, however, to distinguish it by the term fungus hæmatodes, or medullary sarcoma, though it does not appear to me to be always easy to ascertain the difference between the two disorders. It has been said that carci-

nomatous affections are always preceded by a hard circumscribed tumor, and that, after an ulceration has been produced, if it be followed by a fungous excrescence, this is of a cauliflower figure, and a hard firm texture; but such cannot be admitted to be the universal progress of these affections, nor is it unlike to that which the fungus hæmatodes sometimes assumes. It may be said with greater correctness that the carcinoma of the eye is a disease to which persons are most subject in the middle or latter part of their lives, whereas the fungus hæmatodes appears in early life, and most commonly in infancy.

The following is the progress of a disorder which I have also repeatedly seen in persons advanced in life, but do not remember in any who were young. By some it may be called fungus hæmatodes, and by others carcinoma, but I shall content myself with describing it. The sight is lost before any change takes place in the appearance of the eye: after this the pupil becomes dilated without any visible opacity in the crystalline humour. This description designates a gutta serena;

but the disorder does not stop here. After a little time the crystalline humour becomes opaque; and soon afterwards shooting pains are experienced, which dart suddenly through the eye in different directions, rarely continuing long at one time. At this period, if the sclerotica be carefully examined, a bluish, or rather a dusky leaden coloured, spot, of greater or smaller extent, will be discovered in it, on one side of the cornea, and sometimes on both. These bluish or leaden coloured spots gradually spread; the eye enlarges either partially or generally; and in a short time it pushes forwards the eyelids, and fills the whole of the orbit. In some instances the bluish enlargements appear as if they were affections of the outer surface of the sclerótica, and only covered by the tunica conjunctiva. In others they are evidently produced by a distention of the whole substance of the sclerótica, which is pushed out and thinned, where the projection appears by the accumulation of a morbid substance within the eye. A few of the blood vessels of the conjunctiva are usually enlarged,

and have a purplish red appearance, very different from that which is produced by a common inflammation. On examining the internal state of these tumors, after their extirpation, the whole of the eye has been found full of the leaden coloured substance I have described ; divided, in an irregular manner, by membranous laminæ into separate cells, the contents of which have varied much, even in the same eye, in their degrees of consistence. They are usually firm and solid, but sometimes contain pus in separate cysts, and sometimes also osseous particles that differ much in their shape and size. These tumors are in general produced by an irregular enlargement of the whole eye, involving both its coats and humours ; but sometimes the humours are very little altered, the disease seeming to originate in an affection of the tunica sclerotica, which spreads outwards rather than inwards. Sometimes the tumor is confined to one side of the eye, its other side being unaffected. At other times it occupies both sides ; and, occasionally, there have been three tumors annexed to the eye, one on each side and one above, all as

large as the eye; this organ being unaltered in size, though deprived of sight.

The progress which the disorder makes is very various. Sometimes a prominence of a leaden colour has continued in the substance of the sclerotica, on one side of the cornea, many years, without giving pain or occasioning any sort of trouble; and, on the contrary, it has at other times increased rapidly, and the enlarged organ in a few months has completely filled the orbit*. It does not appear

* Since these papers were put together I have extirpated an enlarged eye from a gentleman, thirty years of age, who had lost the sight of it many years; but it occasioned no pain or inconvenience until about six months ago, when it began to enlarge, and an increase in its size had afterwards been perceived almost every week. The enlargement of the eye was universal; the blood vessels had a purplish red appearance; there were three bluish spots on the sclerotica, one of which was as large as a sixpence; and the pressure of the eye against the eyelid kept up a constant uneasiness. In a consultation with Mr. Cline, it was judged advisable, as the increase of the tumor was rapid, to recommend the extirpation of it without delay; and, the patient giving his consent,

that medicines or applications have the power of checking or controuling this malignant disorder; and whenever its nature can be clearly ascertained, the only question is, whether it be possible to extirpate completely every part that partakes of the poison. Although it be a melancholy truth that the operation has too often failed, this does not lead to the conclusion that its performance is always improper, since it certainly has not unfrequently succeeded; and I have the satisfaction to say, though I have sometimes failed, I have several times performed it with complete success.

I performed the operation, in presence of Mr. Cline, a few days after the consultation. Nothing unusual occurred at the time; and on examining the tumor afterwards, the humours of the eye were found to be no otherwise affected than by their enlargement, the blue appearances being occasioned solely by an affection of the sclerotica. No accident happened after the operation, and, in less than a month, the wound was healed, and the patient returned, perfectly well, to his home in Kent.

With regard to the mode of performing the operation, I would advise it to be done in the following manner.

The patient should be seated in a clear light, on a chair of a suitable height to bring his eye on a level with the breast of the operator; and the operator should either sit or stand before him, as is most easy to himself. The patient's head should rest against the breast of an assistant, whose left hand should support the upper eyelid by means of a double blunt-pointed hook, the points of which are seven eighths of an inch distant from each other, and his right hand should be at liberty to do any thing that may be desired by the operator. The hands of the patient should be held by two assistants that sit, one on each side, and an assistant should be ready to give the operator instruments, sponges, &c. A crooked needle armed with a strong thread, and well waxed, should then be passed through the whole of the cornea; after which, the needle being cut off, a knot should be tied in the thread, at the distance of about an inch from

the eye, to hinder it from slipping. This thread is more useful in cases where the eye is so much enlarged as nearly to fill the orbit, than when it is smaller; the finger alone, in the former case, being insufficient to incline the tumor from one side to the other, so as to make the room that is required for the proper use of the knife. If the tumor be considerable, the upper and lower eyelids should next be separated, by dividing with the knife the integuments which unite them on the side next the temple. This will give much additional room for the introduction of the knife to dissect the diseased organ from its attachments. The conjunctiva should then be divided round the whole globe of the eye; and afterwards the knife be carried downwards, on that side where it passes with the greatest ease. It is not possible to give precise directions, as to the mode in which the dissection should be conducted; but great care should be taken to avoid wounding the tumor until the point of the instrument has reached the bottom of the orbit. If it be possible, the ope-

rator should introduce his finger with the knife so as to feel the optic nerve, which, together with the muscles of the eye, should be divided as close to the foramen opticum as the instrument can be carried. In general the common strait scalpel may be so directed as to perform this part of the operation with accuracy; but if the tumor completely fill the orbit, it may be useful, in this part of the operation, to substitute for the strait scalpel one that is a little curved. As soon as the optic nerve and muscles of the eye have been divided, the tumor becomes loose, and may be easily drawn out of the orbit, either by the fingers, or by the ligature that was passed through the cornea at the beginning of the operation. The tumor, when removed, should be carefully examined, in order to ascertain if it be entire, or if it be wounded in any part. In the latter case, the orbit should be carefully examined, both with the eye and the finger; and if any portion of the tumor be seen or felt, it should be dissected away. The state of the nerve should also be examined. If this appear white, and of its natural size, a hope may be entertained

that the operation will prove successful ; but if it appear of a leaden colour, or be altered in shape or size, there is too much reason to fear that the disease has passed beyond the part which has been removed, and that, sooner or later, a fungus will arise in the orbit, and all the old symptoms be reproduced. The hæmorrhage consequent on the operation is seldom considerable. The arteries that supply the eye with blood are not large ; and if a little time be allowed, those that are wounded will contract of themselves. It is desirable to avoid the application of lint or of any other substance within the lids, since it sometimes has given considerable pain ; and, in one instance, in which the operation was performed by an eminent surgeon, it was supposed to occasion violent convulsions by its pressure against the divided end of the nerve. It is sufficient to apply over the eyelids a compress of old linen, folded six or eight times, and moistened with the liquor plumbi acetatis dilutus ; and to direct the compress to be re-moistened, without removing it, as often as it becomes dry. If by accident the eyelid be

wounded during the operation, care should be taken to bring the divided ends together, and to confine them in their natural position either by means of sticking plaster, or of a suture with a small needle and thread. Care should also be taken, before the compress be applied, to adjust the edges of the upper and lower eyelids, so as to hinder one from lopping over the other. If, after the operation, the pain continue violent, an anodyne should be given ; and, if necessary, it should be repeated after three or four hours ; but its repetition, I believe, will seldom be required. Sometimes, after a week or ten days, the upper eyelid is observed to tuck in under the lower ; in consequence of which the upper lashes, by rubbing against the inside of the lower lid, have been known to keep up a painful irritation. This may be obviated by fixing the end of a slip of adhesive plaster on the upper lid, and continuing it lengthways on the forehead, sufficiently tight to make a fold in the skin and hinder the edge of the lid from turning inwards. Cooling medicines, and a spare diet, are necessary for a few days ; but

afterwards a light preparation of cinchona, together with a nutritious diet, will be required. As the wound heals, an adhesion usually takes place between the inside of the eyelid and the bottom of the orbit; and when this happens, it is not possible to give the patient the benefit of an artificial eye, as is done after the operation for the staphyloma or the hydrophthalmia; and he must be contented either to wear a compress, bound by a riband over the orbit, or a pair of spectacles, having plain glass in the ring before the good eye, and glass that is either plain, or in a slight degree opaque, in that before the affected eye.

If, unfortunately, after a careful extirpation of a carcinomatous eye, a tumor again arise in the orbit, it is vain to expect benefit from a second operation, and applications of a painful kind should be avoided as much as possible. Art does not appear to be capable of doing more than to palliate the violent symptoms; by anodyne remedies; by evacuations local or general; and by tonic medicines, when the state of the general health renders these expedient.

ART. VII.

CASE OF EXTENSIVE SUPPURATION OF THE LIVER, WITH APPEARANCES RESEMBLING ASCITES, AND WHICH TERMINATED FAVOURABLY.

By Mr. JOHN BURNS, C. M. S., Teacher of Anatomy and Midwifery in Glasgow.

Communicated to Dr. JAMES SIMS, late President of the Medical Society.

Read Dec. 15, 1806.

HELEN Campbell, aged twelve, on the 20th of June 1798, began to complain of sickness, pain about the upper part of the abdomen, shooting to the right shoulder, and considerable heat and frequency of pulse. These symptoms having been considered as proceeding from a disordered stomach, an emetic was prescribed; the pained parts were rubbed with some embrocation, and saline draughts were prescribed on account of the fever. Complaining still of pain, especially about the side, a blister was on the 10th of July applied over the lower ribs, and was again repeated on the 15th; but without much advantage. For some days previous to this, the belly had been rather fuller than usual; and,

the swelling having increased, diuretics (such as digitalis, the squill, &c.) had been ordered.

I had an opportunity of seeing her for the first time on the 19th of July, and found the right hypochondrium tumid and painful to the touch, especially near the stomach and toward the lower part. She had pain in the right shoulder, and could not lie with ease except on her back, or inclining to the right side. The tongue was furred; the tunica adnata of the eye was of a yellowish colour; the urine was high coloured, and deposited a copious pink-coloured sediment. The belly was bound, and the stools, when procured, were of a light colour. The appetite was much impaired, and she had frequent fits of sickness and retching. The pulse was 115, sometimes 120; the body emaciated, and the skin wet with perspiration, whilst a hectic flush pervaded the cheek. The belly was considerably swollen, and a fluctuation could be discovered. The tumor had not so diffused an appearance as is observed in ascites, but was more rounded, as if

a large globe had been placed below the umbilicus.

She was now put upon a course of mercury, which was continued for three weeks, so as to keep the mouth somewhat sore. During this time the symptoms of hepatic inflammation went off, she slept better, and felt easier; but the hectic symptoms continued, and, although the diuretics had not been discontinued, the belly increased in size.

On the 12th of September, the inconvenience from the tension being considerable, and the umbilicus threatening to inflame, she was tapped in the usual way, and about six pounds of well conditioned pus were drawn off*. After this she was considerably relieved: she had no shivering after the operation, nor any attack of pain in the belly, and the inflammation of the umbilicus went off: all medicine was given up, and the strength supported by good diet.

* It is better, I think, when the swelling is considerable, to draw off the matter with a trocar than to allow the tumor to burst, as we can thus take away the fluid slowly, and stop for a time if the patient become faint.

By the middle of October the belly had again swelled, but not to one half of its former size; the umbilicus protruded and inflamed: a poultice was applied, and in a few days it burst, discharging nearly two pounds of matter. For a fortnight, pus continued to ooze out of the aperture; but after this the quantity diminished greatly, the opening healed up, the strength returned, and she has remained in good health ever since.

ART. VIII.

OBSERVATIONS ON THE HARE-LIP.

By ISAAC RAND, A.M. M.M.S.S. C.M.S.

Read May 22, 1797.

NATURAL deficiencies are more frequent in the upper lip than in any other part of the body ; but, happily, these are very rare.

Every hare-lip is attended with great deformity : it prevents the child's sucking, and it is with great difficulty a child is nourished without the breast. It excites great anxiety and distress in the mother, lest the deformity should be entailed upon her future progeny, and that at a time when the nervous system is peculiarly irritable from a recent parturition.

These reasons induced me to perform the operation for the hare-lip two days after the birth of two children.

I. The wife of S. H. was delivered, April 4, 1790, of a healthy girl with a hare-lip ; a large fissure extending backwards along the whole course of the palate through the velum pendulum palati into the throat, but there was no loss of substance in the bone.

As soon as the mother discovered the deformity of the child, she urged me with the greatest importunity to perform the operation for the hare-lip; and, notwithstanding I could find no precedent in any author for performing it upon so young a subject, the above reasons and the entreaties of the mother induced me to comply with her request. I directed the bowels of the child to be cleansed with clysters; and on the sixth of the month, two days after the child's birth, I performed the operation (assisted by Dr. Lloyd) agreeably to the directions in Bell's Surgery; with only this deviation, that I carried the incision a little way up the aperture in the nose, so as to remove a little of the skin and flesh from the lower part of the septum nasi, and the interior lower part of the ala nasi, without extending it to the cartilage; and I passed the upper pin through the inferior part of the septum and ala nasi below the cartilage, by which I approximated the parts to advantage.

The child being placed upon a pillow on a table, made very little resistance during the operation. I turned her upon her side a few times to prevent the blood's descending either

into the lungs or stomach. After the operation I composed her with a drop or two of liquid laudanum, repeated *pro re nata*, and supported her entirely with clysters. I enjoined the nurse to keep from the child every thing that might excite sneezing or a cough till the accomplishment of the cure.

On the fifth day from the operation I removed the pins: a complete union of the lip had taken place. I then applied two pieces of court plaster across the upper lip to support it. The child cried little during the cure: the scar in the lip was so far obliterated in a few months, as to be scarcely visible. The passing the pin through the lower part of the septum and ala nasi so lessened the aperture from the nose into the fauces, that, soon after the cure, an opening into the fauces could not be discovered but by a critical examination; and, as I passed the lowest pin through the prolabium, there was no such indentation in the lip as commonly succeeds this operation.

In the child's sixth month, I, along with some of the physicians of this town, examined the fauces, and we discovered the alveolar pro-

cess of the maxilla superior and the ossa palati so nigh together, that we could scarcely insinuate a silver shilling between the sides of the fissure at the anterior part of the fauces; and the posterior parts were, at the edges of the fissure, besmeared with coagulable lymph, the harbinger of the union of the coverings of the palate. The regurgitation of the food through the nose in the act of deglutition gradually lessened, and had now entirely ceased.

The efforts of nature in completely uniting the bones in the middle and posterior parts of the fauces were arrested by a diarrhœa, which destroyed the child in its seventh month.

II. Mrs. S., of Worcester, brought her daughter, three months old, September 4, 1790, to this town with a hare-lip, and a fissure of the bones of the maxilla superior, at the least, half an inch wide; the velum pendulum was fissured, but without any deficiency of bone.

After I had cleansed the bowels of the child, I performed the operation in presence of Doctors Lloyd, Kast, and Rand, jun.; alternately

nourished and evacuated the bowels with clysters, and composed it with opiates.

The fifth day I removed the pins; the union of the lip was accomplished: I supported the parts with court plaster for a few days. As I could not remove any part of the interior of the ala nasi nor septum, the aperture from the nose into the fauces was larger than in the child of Mr. H.

This child was much more refractory during the operation, and more difficultly supported during the cure, than the first child.

In September 1792 the parents brought the child to this town. I inoculated her for the small pox: after her recovery I had the pleasure of shewing her to Doctors Kast and Rand, jun. The alveolar process of the maxilla superior, and part of the ossa palati, were completely united; her fore teeth were almost as close together as if she had never had any fissure in the bones; but the lip and gums had a small semicircular excavation where the fissure had been.

Her father informed me this autumn, 1794, that the aperture in the posterior part of the

ossa palati was less than when I saw her in 1792, and that her speech grew better.

III. October 2, 1792, I delivered the wife of J. H. of a healthy girl, with a hare-lip, without a fissure of the bones of the palate.

After evacuating the meconium with clysters, I performed the operation in presence of Doctors Kast, Jackson, and Rand, jun. and treated her in every respect as the two other children, and removed the pins the fourth day: the parts adhered, and a complete cure was effected.

The child was put to the mother's breast a few days after; sucked as well as any child till she was weaned; and is at this time a fine healthy handsome girl, with scarcely a trace of the scar in her lip.

The advantages that accrue from performing this operation at so early a stage of life are many.

Children, for some days after birth, seem to be in a torpid state, and in general require but little nourishment.

They are easily managed, and make no opposition during the operation.

If there is only a fissure in the lip, and

sometimes when there is one in the bones, immediately after the union of the fissured part of the lip, the child is capable of sucking, by which the chance of surviving the infantile state is increased.

The disagreeable impression upon the mother's mind, of propagating the deformity in the family by future births, is removed.

Reasoning, perhaps, upon the use, origin, and insertion of the common and proper muscles of the upper lip, viz. the constrictor, seu orbicularis oris, musculi zygomatici majores et minores, canini, incisorii, et cæteri, might induce a surgeon to perform this operation upon an infant with a hare-lip, and fissure in the bones, as soon as possible after its birth.

Would not the action of these muscles be a constant though small *nisus* after the union of the lips, to approximate the fissured maxilla superior in the progress of its growth, by preventing a disproportionate lateral enlargement of it? Would not, therefore, the maxilla superior, as it enlarges, unite and close the aperture, especially at the anterior part?

I have consulted many chirurgical authors,

but have not discovered any one that has recommended performing this operation at so early a stage of life as two of these children were at, with a view to accomplish an union of the bones.

Mons. de la Faye, in the *Memoires de l'Académie Royale de Chirurgie, Observations sur les Becs de Lièvre*, page 610, tome premier, mentions the advantages of this operation to a child four years old. “ Ce n'est pas là le seul avantage, qu'il en a retiré; il parle distinctement, quoiqu'un peu du nès, défaut qu'il n'auroit plus si son palais étoit entièrement re-fermé. Je l'ai vû quatre ans après l'opération, et *l'espace de la voute du palais étoit déjà diminué*; il y a, par conséquent lieu d'espérer que peu à peu les os se rapprocheront au point qu'il n'y en aura plus, et peut-être la nature a-t-elle déjà fait ce rapprochement.”

In the fifth observation, in the same Memoir, page 617: “ Deux ans après l'opération, *l'écartement des os du palais étoit fort diminué*; la même chose n'est point arrivée à celui dont j'ai parlé dans la troisième observation; ce qué doit faire presumer que l'union des parties

molles contribue, quand on la procure de bonne heure, au rétablissement des parties dures. Serait-ce que l'air qui touche celles-ci sans être modifié causeroit quelque desséchement aux fibres osseuses, et empêcheroit par-la leur allongement, et par conséquent le rapprochement des os ? Ce qui est certain, c'est qu'il est avantageux pour ce rapprochement de faire l'opération lorsque le sujet est encore *dans un âge tendre**."

Boston, New England,

Nov. 24, 1794.

* The author seems to have overlooked a paper in the fifth volume of the Memoirs of the Royal Academy of Surgery of France, page 292, in which the French academicians appear to reason in the same manner with the author, and relate cases in which Mr. Busch performed the operation at four and eight days old with success.—EDITOR.

ART. IX.

HISTORIES OF TWO EXTRAORDINARY CASES.

By W. NORRIS, Esq., Surgeon to Charterhouse, and Vice President of
the Medical Society.

With an Engraving.

Read January 1810.

TO detail the histories of unusual diseases is not, in general, to communicate any very useful information ; the rarity of their occurrence preventing those repeated observations of various individuals which lay the surest foundation of pathological facts ; and mankind being less interested about those maladies that are seldom seen than such as are daily met with. Some advantage, however, beyond the mere gratification of curiosity, will be experienced by those of our profession, under whose inspection and care such cases shall come as are here related ; and they appeared to me to be the more proper to be communicated to the Society, as such solitary cases are not thought worthy of a separate publication.

The first, which is the only instance of the

kind that I have seen, and which, as far as I know, is yet undescribed, is

A DISEASE OF THE CRANIUM.

CASE I.

Mrs. P., the subject of the following observations, aged 51, consulted me in the month of August 1803 respecting a complaint in her head. After the death of this valuable woman, I requested my friend Mr. Upton, whose patient she was, to favour me with an account of what he had observed previous to my seeing her; and he soon after sent me the following:

“ Mrs. P. fell in going down the cellar stairs,
“ about the middle of April 1803, and pitched
“ with her forehead against a heap of wood.
“ She was sick and faint for some short time,
“ and mentioned the circumstance to her husband on his return home in the evening;
“ but on the following and succeeding days she
“ thought little of it. In the beginning of
“ June following she consulted me respecting
“ an erysipelatous inflammation on her arm,
“ without any allusion whatever to the above
“ accident on her part; nor was there any

“ thing in this indisposition which led to any
“ suspicion of farther mischief. About the
“ middle of July, in consequence of violent
“ pain in her head, which she considered as
“ rheumatic, she consulted the late Dr. Nan-
“ kivel, who prescribed for her during more
“ than a fortnight, without any alleviation of
“ her sufferings. August 2d, she sent for
“ me. I found her labouring under a smart,
“ active fever ; a hot and dry skin ; quick
“ pulse, with considerable anxiety and agita-
“ tion ; and complaining of violent pain in
“ her head generally, but especially on the os
“ frontis. Upon this bone was a tumour with a
“ large, hard base, terminating in a conical
“ point, exactly resembling the growing horn
“ of a young heifer. This evidently contain-
“ ed a fluid, which on the following day was
“ set at liberty with the point of a lancet, and
“ upon examination, a considerable surface of
“ the bone was found bare. In a day or two
“ afterwards you were consulted,” &c.

August 9th, I first saw this patient, and found her in the state described by Mr. Upton. The bone was bare to the extent of a shilling,

and in the center of this part was an opening large enough to admit the end of a probe.

From a consideration of the previous history, I did not doubt that this was the effect of the fall; and from the violent pain in her head, and the other symptoms, I thought it probable that the dura mater was inflamed and producing pus. I enlarged the opening in the scalp, advised the head to be fomented, and the bowels to be kept open. The symptoms were not so pressing as to demand the immediate application of the trephine, especially as I hoped that the hole in the bone might afford an exit to any matter formed within.

At the end of a week, however, as there was not the least abatement of her sufferings, I applied the trephine in the confident expectation of removing the cause of her pain, for there was not the least appearance of disease on any other part of her head. The operation being over, I was not a little surprised to find that the dura mater exhibited a perfectly healthy appearance; and that there was no other discharge of matter than what oozed from the substance of the bone, and which did not exceed in quantity that which the wound had been daily produc-

ing. Some temporary alleviation of pain followed ; but which was, I think, entirely attributable to the medicines that were prescribed for her.

In the course of a week' she complained of pain toward the posterior and upper part of the left parietal bone, and I there discovered a little tumour which was tender to the touch and contained a fluid. This I immediately opened, and found the bone bare. After a few days, this portion of bone, of the size of a sixpence, separated, leaving a healthy granulating surface, and the wound very soon healed. She, however, still continued to be much indisposed, and complained of pain all over the head ; but no other appearance of disease could be discovered until after eight or ten days more, when exactly such another tumour appeared on the opposite side of the head, which being opened, another piece of bone, almost separated, presented itself.

To notice the weekly, often daily, occurrences of this kind which took place, would be unnecessarily to occupy the time of the Society ; let it suffice therefore to observe, that more than two days rarely passed without a

tumour appearing on some part of the head which contained matter, and which, being opened, exposed a piece of bone either detached or nearly so. The separated pieces of bone, for exfoliations I cannot properly call them, were, during the first two or three months, from the outer table only of the scull; after which time the dura mater was generally exposed by the separation of each piece, and the wounds in the scalp no longer healed. At length, worn out with suffering, she was relieved by death on the 10th of May, 1804.

Lest it should be supposed by any one that this disease had its origin in syphilis, it is proper to observe that the patient had not one other, even doubtful, symptom of that disease; and that, from the most minute inquiry that I could make, it seemed almost certain that she never had been infected by its poison. Whether this disease commenced in the bone or in the absorbents of the part, I cannot take upon me to say; but to the extraordinary activity of those vessels is entirely to be ascribed the separation of the various pieces that were detached from without, and the silent disappear-

ance of others from within the cranium. This will be evident to those who examine the inside of the skull here described, which I have the satisfaction of submitting to the inspection of the Society*. Had the patient survived a few months longer, not a vestige of the upper part of the skull would have remained; and it is worthy of remark, that whenever any separation of bone had taken place, there was no endeavour on the part of nature to supply the deficiency by the formation of new bone.

The other case which I have the honour of presenting to the Society, and which is the only one of the kind that has occurred to me, is perhaps no less extraordinary than the preceding. The subject of it will be my apology for giving its history in the Latin language.

CASE II.

DE SATYRIASMO,

Quidam ad me venit, concilium petens, ore macilento, formâ squalidâ, facie cadaverosa, quem in proclivi erat credere, carceris profu-

* See the Engraving at the end,

gum, & jam fame morboque consumptum, vix diutius vitam sustinere posse. Universa corporis ægritudine laborare se questus est, ita tamen, ut dolore nullo præcipuo, nisi tardo quodam sed minime acri circa anum afficeretur, in qua parte, paucis ante mensibus, ictum acceperat. Iste dolor ægrotanti ipsi haudquamquam in causa morbi erat; quippe tantum a me interrogatus in ejus mentionem incidit. Affirmavit vero totam sui corporis invaliditatem, quæ cito vitæ ipsi finem erat impositura, *nimio veneris usui* tribuendam esse. Subito mihi in mentem venit stare coram hominem discinctum & impurum, qui intemperantiâ suâ morbum in se traxerat, ideoque rogavi quamdiu hac libidinosa cum fœminis consuetudine destiterat. Omnia vero alia—et mihi admirationem haud levem movit ille, qui respondit, se moribus fuisse semper castis & sobriis; atque isto, quem prius memoraverat, & qui indies magis magisque ingravescebat, *furore*, intra duos tresve menses correptum fuisse. Risum vix tenebam, cum dudum intellexi hominem annum ætatis agere sexagesimum septimum. Cum tamen in ipso nihil non fide dignum videbam, narra, inquam, mihi, qualis

tibi vitæ fuit ratio. Respondit annum circa vicesimum sextum ætatis suæ se uxorem primam duxisse, ex qua duo sibi nati sunt liberi: quâ vero mortuâ alteram sibi quadragesimo jam & sexto ætatis anno nuptam esse uxorem, quæ ipsa prius ex altero marito duo liberos pepererat, & jam vidua triginta annos nata est. Ex hac porro, inquit ægrotus, duo alteri mihi procreati sunt liberi: sed nunquam memini, me in venerem propensioem fuisse, nedum insana & insatiabili libidine permotum, ante hos duos menses, quando me diro hoc & teterrimo correptum esse morbo sensi; cujus vis tanta est & tam effrænata, ut expleri nequeat; & ad coïtum cum uxore me singula nocte, quindecies saltem, imo vicies nonnunquam impellat. Hic vero cum ægrotantem meum priapismo laborantem se fallere augurabar, & fortasse nullâ seminis jacturâ in venerem ruere, paulo curiosius id ab illo quæsivi. Affirmat autem se vix in lecto decumbentem corpus uxoris contingere, cum, tanquam cæstro percitus, in repetitam venerem properat, neque unquam nisi pleno coïtu res peragitur: seminis quidem emissio potius angere quam voluptate afficere visa est. Narratio plane mirifica erat;

& cum affectionis causam non minus quam rei veritatem penitus explorandam esse cense-rem, rogo an mihi liceat cum uxore colloqui. Imo, inquit, id ipsa summopere vult, quippe admodum invalida tuique indiga concilii. Eo visum, & reperio fœminam matronali pudicitia & gravitate decoram, quæ omnia dudum a marito narrata amplissimo testimonio comprobavit; adjecitque, se propter noctes continuo insomnes & inquietas multa lassitudine corporis ægram esse; & propter vim sibi toties oblatam pudenda sibi tumore & dolore affligi. Cum de constanti in coïtu immissione seminis rogarem, fidem fecit, virum omnia vere dixisse; nunquam enim *aliter* ab illo rem actam fuisse. Quibus verbis ea facilius & libentius credidi, quod mulierem bis nuptam & ex utroque marito bis matrem experientia satis hæc edocuerat; neque omnino constabat cur hi ægro- tantes me fallere conarentur. Ergo utrique fidam habendam esse censui. Locum vero at- trectanti mihi, in quo vir ictum acceperat, sub sede glandis prostatae tumor inventus est parvus & tactui durus, versus anum vergens. Digitis compressus ægrotanti dolorem sed not acutum

dedit: cutis porro tumorem tegens colorem haud mutaverat. Medicinam præscripsi tonicam, mandavi ut cibo generosiori vesceretur, partique morbidæ fomenta cum malagmate applicaret. Septem intra sequentes dies tumor multum crescere, intraque mensem mollior fieri, quando, incisione facta, glutinosi & saniosi profluxit humoris abunde. Paulo post omnia morbi indicia excedere, & vulnus facile sanatum fuit. Quid multa? Ægroto salus pristina redintegrata est. Crediderim istum humorem primitus e vesiculis seminalibus erupisse; partibusque istis inflammatis irritationem ortam singularem hunc morbum peperisse.

ART. X.

ON THE MEDICINAL PROPERTIES OF SANGUINARIA CANADENSIS*, OR BLOOD ROOT.

In a Letter to the PRESIDENT from Dr. N. SMITH, Hanover (North America).

Hanover, Feb. 1807.

Sir,

THROUGH the politeness of Mr. Hall, the bearer, I transmit to you the root of an American plant of which I have not been able to find an account in any European publication. I know it by no other name than that of Blood Root, which is the vulgar name for it here ; a name it probably received from

* The reader will perceive that in the following letter the plant is called *Blood-root* alone ; Dr. Smith acknowledging himself unacquainted with its botanical name. Upon a minute examination, however (at the request of the Council of the Medical Society), as well of the specimen sent, as of the loose description given, I have no hesitation in denominating it as above.

The Sanguinaria is a genus of the polyandrian, monogynian class and order ; generically characterised by having a two-leaved calyx ; eight petals ; and an ovate single-celled silique.

We know of but one *species* *S. Canadensis*, Canadian Sanguinaria, Puccoon, or (as denominated above) Blood-root. Root tuberous, reddish ; scape simple, one-flowered, with a

the circumstance of its having a red juice which issues from the fresh root when recently cut or broken. As I have not any of the leaves or flowers by me, I cannot be very particular in describing it.

Blood Root is a perennial plant growing wild in the woods. The leaf and flower-stalk spring directly from the root. It has a small beautiful white flower, I think about five petals, more than twenty stamens, and one pistil. The

single leaf issuing from each, and unfolding into lobes. The tuberous root is thick and fleshy, placed transversely, and throws forth many slender fibres or radicles (which are the parts referred to by the term *root* in the paper) of a reddish saffron colour, and yielding a juice of the same hue, of a bitter and acrid taste. A similar juice flows forth also on cutting the leaves and footstalks. These leaves and flower-stalks are radical, as described in the letter, but the plant is *not* perennial. The stems issuing from the root are slender, round and glabrous, of a palish-green hue, or of a brownish-purple: the flowers are white and terminal; the petals are at first concave, then flat, and at last rolled back and convex, marked with slender streaks; the anthers are saffron-hued upon white filaments. The root, leaves, and flowers, are equally inodorous. This plant is occasionally cultivated in our own flower-gardens, and is easily increased by parting the roots in the autumn. With us the *Sanguinaria* flowers in the beginning of April.

J. M. GOOD, *Sec. M. S.*

leaf bears a close resemblance to that of colts-foot.

The medical virtues of blood root are very considerable. It is capable of making a very strong impression on the human system. The dried root, pulverised and given in doses of four or five grains, generally pukes pretty violently, producing a great prostration of strength during its operation, which continues for some time. I have not observed it to operate as a cathartic. The taste is acrid and unpleasant. The pulverised root taken into the nose excites sneezing, and produces a sense of heat in that organ. It also acts as an escharotic on fungous flesh. I have cured several polypi of the soft kind by the continued use of it as a snuff. This vegetable has long been known and used by the people of this country as a domestic medicine. A few physicians have been acquainted with some of its virtues, and empirics have used it as a nostrum; but except a dissertation written upon it by some person at Philadelphia, and which I have not seen, I believe it has never been noticed by any writer on the materia medica.

Since the writings of John Brown have been generally read by medical men in this country, it has become fashionable to generalize every thing relating to medicine both in theory and practice ; to refer all diseases to one or two general causes ; and to consider medicines as differing from each other only in point of stimulant power or force of impression which they make on the human system, a circumstance which, I think, has retarded the progress of medical science among us. If I am not deceived, diseases depend more on the kind or quality of the actions excited by their causes, than on the quantity of action. Indeed, it is a doubt in my mind whether a meré excess or deficiency of action can with propriety be called a disease. The obvious consequences of this opinion will lead us to a different conclusion respecting the operation of remedies, viz. that certain substances may, by the peculiarity of impression which they make on the system, be better adapted to cure certain diseases than others, which apparently act with much greater force. I think we have abundant proof of this proposition, and on this

principle I have tried a variety of emetic drugs for diseases of the lungs, especially for consumptive complaints. I once thought that the good effects of emetics in that disease depended entirely on their nauseating properties; but from experience I have changed my opinion, and now conclude that some kinds of emetics, from the kind of impression which they make on the stomach, are much more successfully employed than others.

About two years since, I learnt from some source or other that blood root had been given with success in cases of hæmoptysis, and, having a case of that kind, immediately gave it a trial. The success was beyond my expectation. I soon thought of trying it in cases of cough, and from that time have been almost in the daily habit of prescribing it in such cases. From more than two years experience in the use of blood root in affections of the lungs attended with cough, I cannot assert what has been asserted of foxglove, that it will cure a confirmed consumption; but I can in confidence say, that, in my opinion, it is capable of doing more towards preventing that fatal

disease than any one remedy I have ever been acquainted with.

I have given blood root in powder, in tincture, and in simple infusion; which last is the better mode of giving it. In powder it operates more roughly, and spirit does not appear to extract its active principle sufficiently. When I give it for a cough, if the symptoms are urgent, I begin with a dose sufficient to excite puking; but generally endeavour to give it in as large doses as can be borne without that effect, and repeat it four or five times each day. Where there is great irritation and a constant disposition to cough, I join opium with it. Given in this manner, if the patient has not a confirmed hectic, it generally cures the cough.

I have also found blood root useful in cases of inflammatory rheumatism. In that disease I at first give it so as to puke, and then continue it in smaller doses: managed in this way, it is more certain to produce a diaphoresis than any other emetic. Blood root I understand has been recommended in cases of jaundice in the dissertation above alluded to; and a very

respectable physician informed me that he had known it cure epilepsy.

I have never known blood root produce any lasting bad effects. It never affects the head like the foxglove, and is on that account a much safer medicine.

In the hands of scientific men I am confident it will be found a very valuable addition to the *materia medica*.

Should you request it, I will hereafter send you some of the leaves, flowers, and seed of the blood root, which can easily be procured the ensuing summer.

NATHAN SMITH.

ART. XI.

CASE OF TIC DOLOREUX, OR PAINFUL AFFECTION OF THE FACE.

By ANTHONY FOTHERGILL, M.D. C.M.S., late Physician at Bath,
now of Philadelphia.

Communicated in a Letter to J. C. LETTSON, M.D., President of the Medical Society, dated February 21, 1803.

Read Feb. 28, 1803.

MRS. D——, an elderly lady, aged about sixty-five, has for upwards of five years laboured under a most painful disease seated in the right cheek, and extending to the articulation of the lower jaw. It came on without any known cause, and she has never had a clear interval free from pain, except during sleep and once in August last for about two hours, and that without any cause to which she could attribute the ease. It has since that time gone on in its usual course, still rather increasing, in spite of every internal and external remedy that could be thought of, and at the expence of all her teeth, which have been successively extracted. Opening the mouth, cold air, or even touching the face with a fine cambric handkerchief, increases the pain, which is

otherwise aggravated by paroxysms, though she is never entirely free from pain. Sometimes there are thirty fits of excruciating anguish in a day, as if a fish bone stuck into the gum or cheek. Warm bathing and pumping, repeated nearly a hundred times, only increased the pain. She has sometimes rheumatic pains of the shoulders, striking to the stomach. Electricity was tried for thirteen days, but gave no relief, nor did blistering do any good. She then began to take opium, and now takes twelve grains a day, but it affords no sensible relief. Even the saliva in passing down causes pain. The sensation is as if scalding water was pouring along the inside of the mouth. Sometimes a prickling sensation is felt in the tongue.

For this complaint she has successively consulted Dr. Pendergast, Baron Dimsdale, Doctors Falconer, Lysons, Reynolds, Simmons, Melville, &c. Surgeons Sharp, Abernethy, Rush, Hamilton, *cum multis aliis*. Leeches, blisters, anodyne fomentations, lotions, embrocations, and issues;—*internally* ether, volatiles, valerian, asafoetida, guaiacum, wolfs

bane, cicuta for ten months ; also bark, steel, extr. hyoscyamus nigr. ; and, lastly, Perkinian tractors : but all to no purpose. Finding the faculty had thus exhausted their whole artillery on this intractable case, I was at a loss what to propose : therefore, as a dernier resource, I earnestly recommended the operation of dividing a principal branch of the nerve leading to the seat of the disease. To this, however, she positively refuses to submit.

ART. XII.

REMARKS ON THE LAND WINDS AND THEIR CAUSES.

By WILLIAM ROXBURGH, M. D.

THE land winds on the coast of Coromandel are those hot winds which blow at a particular season of the year, and hour of the day, from the western hills, commonly called the Ghauts, towards the Bay of Bengal. In the more inland countries, as above the Ghauts, they are not confined to any regularity, though they are felt sometimes with a great degree of severity and for hours together.

I understand also that in the upper parts of Bengal they are sometimes experienced very severely; but whether from the west, or the northward, or in what part of the year, I have not been able to ascertain. As far as this only tends to prove the insufficiency of the denomination, it would signify little, although in other respects it would be of more moment.

As they are generally supposed to be peculiar to this country, and are felt during several

months in the year, we should imagine their history and causes to have been perfectly investigated and understood; but I know not why, neither the one nor the other have as yet been satisfactorily explained.

The most plausible reason generally given for the great accumulation of heat in them is the heat of the season in which they prevail, and the long tract of country over which they have to pass. That this, however, is not the true cause, it shall be my endeavour to demonstrate; to which I will add an attempt to point out the most probable one, founded on known chemical principles.

Respecting the theory I have to offer, I regret that it has found but few patrons in this country, which, however, I flatter myself may be ascribed more to the manner in which it has been proposed, than to the foundation on which it is constructed.

In order to facilitate the explanation of my sentiments, as well as to shew that the land winds really deserve some attention from the philosopher, I shall briefly recount the phenomena accompanying their beginning and pro-

gress, as well as the effects by which they are generally followed.

Could my pen equal my sensations, I should be able to paint their effects in the most lively colours, aided by eight years experience in a country the most noted on the coast* for their intensity.

The land winds are preceded in the latter end of March or in the beginning of April by whirlwinds, which between eleven and twelve o'clock at noon hurry in various directions, mostly from west to east, towards the sea. These are called by the natives Peshashs or Devils, because they sometimes do a little mischief to the lighter buildings.

About the same time or a little after the appearance of the whirlwinds, we may observe all ranges of hills garnished as it were with clouds, which become daily darker and heavier, until they discharge themselves with much thunder and lightning in a heavy shower of rain. After this marked phenomenon the land winds set in immediately with all the violence of which they are capable.

* Samulcottah in the Northern Circars.

Their commencement is generally in the latter end of April, or beginning of May, and their reign lasts to the earlier days of June, during which period they generally exert their violence from ten or eleven o'clock in the morning until about three or four o'clock in the afternoon.

In this season the atmosphere is commonly hazy and thick, except that in the evenings and nights the sky is serene and clear, provided the land winds do not continue the whole day.

The rising sun which portends a land wind day appears of a fiery red, and as if involved in mist, which mist is changed afterwards into clouds that lie heavy on the Ghauts.

The land wind of each day is almost always preceded by a long calm, and immediately by a cloud of dust.

Their diurnal violence is terminated along the coast about two or three o'clock, by the setting in of the sea breeze, which wafts delight and health as far as its influence extends, which is not more than ten or twelve miles inland. An abatement of their intensity from

thence to the Ghauts is all that can be hoped for.

The sea-breeze regularly begins in the afternoon at one or two o'clock, blowing pretty steadily until sunset, when it dies away gradually, and at sunrise it is again perceptible, though weakly.

When I say its influence is only felt ten miles inland, I do not wish to be understood that it does not extend farther: I mean only its powerful refreshing properties, which it loses in proportion to the distance from the sea, and in an inverse ratio to its strength, which is not great. In general it arrives at thirty miles distance from the sea in the evening, and is then only agreeable by the ventilation it effectuates.

In the country above the Ghauts, as in Mysore, the east wind prevails also in the afternoon, but from a period much earlier, or cotemporaneous with the sea-breeze on the coast, which renders it clear that this inland breeze either does not extend farther than to the Ghauts, or really originates there; a point

which deserves to be ascertained, as another phenomenon depends upon this circumstance.

Should the sea-breeze fail, as sometimes happens, the land wind decreases gradually until it dies away in the beginning of the night, which, on account of its calmness, is dismal to a degree: next morning, a little motion of the air is again perceptible, but at the usual time the wind sets in as strong and hot as the day before. Every thing we put our hands upon is then distressing to the touch, which must be the case when the temperature of the body is inferior to that of the atmosphere. This we experienced for almost a fortnight in the year 1799 in the Northern Circars, when the thermometer at eight o'clock in the night stood at 108° , and at noon at 112° . Shades, globes, tumblers, then very often crack and break to pieces, and the wooden furniture warps and shrinks so much, that even the nails fall out of doors and tables, &c. In their greatest intensity, however, I have never seen the thermometer rise higher than 115° , viz. in the coolest part of the house, though some say they have observed it at 130° .

The Ghauts, and the hills at no great distance from them, are then seen lighted all night by spontaneous fires, and often in a very picturesque manner.

These illuminations appear, in general, about the middle of the mountains, and seldom or never extend to the top or bottom of them. They take place especially on those hills on which the bamboos grow very thick, which has probably led the natives to explain this phenomenon so rationally, by ascribing it to the friction of these bushes against each other.

Lieutenant Kater, of his majesty's 12th regiment, thinks that the corky bark of the *adenanthera pavonina* is often spontaneously inflamed, as he has frequently found, on his surveys, its bark converted into charcoal, and several of these trees burnt down to the roots, although they were not in the vicinity of any other trees.

In Europe I know these spontaneous ignitions have been much discredited ; and I doubt not but should these few sheets ever be published, many objections will be raised against what I have related : but I have endeavoured

to state facts only, which a luxuriant imagination might have painted in more striking colours, but I am sure not with stricter adherence to truth.

The land winds are noted for the dryness which they generally produce on the face of the country, as well as on that of the animal creation. This sensation is particularly felt in the eyelids, which become in some measure quite stiff and painful. This is owing to the immediate volatilization of all humids that irrigate our organs, and which, in this particular one, probably gives rise to inflammations of the eyes, so frequent at this time of the year*.

The continuance of this wind causes pain in the bones, and a general lassitude, in all that live; and, in some, paralytic or hemiplectic affections. Its sudden approach has, besides,

* The eye flies, so often supposed to occasion it, produce a transient and sharp pain in the eye, but never, I believe, a lasting inflammation.

It is generally thought infectious, and may be so by the interference of the eye flies carrying the contagious matter from an affected eye to a sound one.

the dreadful effect of destroying men and animals instantaneously.

It is not very uncommon to see large kites or crows, as they fly, drop down dead ; and smaller birds I have known to die, or take refuge in houses, in such numbers, that a very numerous family has used nothing else for their daily meals than these victims of the inclemency of the season and their inhospitality. In populous places it is also not very uncommon to hear, that four or five people* have died in the streets in the course of a day, in consequence of being taken unprepared. This happens especially at the first setting in of those winds.

The natives use no other means of securing themselves against this wind but shutting up their houses, and bathing in the morning and evening ; Europeans cool it through

* Four people dropped down dead at Yanam, in the year 1797, an hour after my arrival there, from Masulipatam ; and at Samulcotah four or five died the same day on the short road between that place and Peddapore : the number of inhabitants of either of these places does not exceed, I believe, five thousand.

wetted yats* made of straw or grass, sometimes of the roots of the wattiet†, which wetted, exhale a pleasant but faint smell. It will be incredible to those that have never witnessed it, but the evaporation is really so great, that several people must be kept constantly throwing water upon the tats (eight feet by four) in order to have the desired effect of cooling a small room.

It would be scarcely necessary to observe, if it were not in contradiction to public opinion, that the cold produced is not a peculiar property of the wind, but depends upon the general principle that all liquids passing into an aëriform state absorb heat, and cause immediately around them a diminution of it, and consequently a relative coldness. On the same principle depends also the cooling of wine and water, in the land wind seasons, the latter in light earthen vessels which allow an oozing of

* The frame of them is made of bamboos in the form of the opening in the house to be tatted, let it be door or window, which is then covered with straw in the manner every one thinks best suited to retain the water longest.

† *Andropogon muricatum.*

the water through their pores, and the former in bottles wrapped in a piece of cloth or in straw, which must be constantly kept moistened.

The great violence of these winds is at last terminated by frequent showers of rain, in June, in the low countries, and by the greater quantity of the regular rains falling in the inland countries, which seem to suspend the partial formation of clouds along the Ghauts, and to leave them clearer, and visible at a greater distance than they had been at any other period of the year before.

After the enumeration of so many disagreeable circumstances, I am naturally led to an investigation of the causes that produce them. Before this can be done, however, I must prove, according to promise, that the theory of our philosophers is founded in error.

They ascribe, as already observed, the extraordinary heat which distinguishes these winds from most others, to the absorption of caloric in their passage over an extensive tract of country, at a time when the sun acts most powerfully in our latitudes.

According to this theory, the heat should

increase in proportion to the space over which this wind is to travel; it should be hotter on the coast than it is at any part of the country inland, or, which is the same, it should decrease by degrees from the eastern to the western sea of the peninsula. Experience, however, teaches us the reverse; for it is hottest near the Ghauts, and among the vallies between those ranges of hills, than at any place on the coast; and the heat of those winds decreases also as they approach the Bay of Bengal, and in a direct ratio from the Ghauts to the sea; accordingly, it is at Ambore* hotter than at Velloret†, and at this place again than at Arcot‡, Conjeveram||, and Madras, where

* A place situated in the most western valley of the Ghauts, immediately at the foot of the steepest ascent into the Mysore country.

† Lies in a spacious valley nearly at the entrance of the Ghaut mountains, and has the advantage of an open communication with the flat country to the north east.

‡ A large city, the capital of the nabobs of the Carnatic, east of the ranges of hills called the Ghauts.

|| . . . miles east of the latter place in the road to Madras, a large populous place. I have chosen this tract or line as the most known, although not the hottest, for Ellore, Rajahmundry, and Samulcotah in the Northern Circars, are by far more exposed to these winds.

the land winds are seldom felt with any degree of severity.

Time is another measure applicable to the acquisition of heat, as it increases to the greatest pitch which a body is capable of receiving in proportion to its continuance; the land winds should therefore be cooler when they set in at ten or eleven o'clock, and hottest at their termination in the afternoon; they should be so at least at noon, when the sun is nearly vertical, and has the greatest influence on the substances from which heat is to be attracted. The contrary, however, comes nearest to the truth; for it is known that these winds set in with their greatest violence and heat at once, which rather abate than increase, as might be expected.

We should, on this principle, farther suppose the heat would increase gradually with the return of the sun to our latitudes, from its southern declination, and stand always in proportion to its position. We find, however, that experience also contradicts this point of the theory under discussion; for after the sun has passed our zenith*, the land winds set in

* The sun is in the zenith at Madras about the 26th of April.

at once with all their intensity, in the manner before described, and they cease as abruptly before its return again*.

A material change in the temperature of this climate is certainly effected by the approach of the sun from the south; but the heat which is thus caused, and which increases by imperceptible degrees, is never so great, and is only felt by those who expose themselves to it unprotected; for the air remains proportionally cool, and our houses afford, in this season, a pleasant retreat. We find it far otherwise in a land wind; for this penetrates our inmost recesses, and renders life miserable every where.

I have before observed, that winds equally hot with those of periodical duration are felt in all parts of the country, and at different seasons; a circumstance alone sufficient, if proved, to overthrow the groundwork of the old theory.

For a confirmation of this, I will appeal to the general observation, that immediately be-

* The sun is again in our zenith on its southern declination about the 19th of August.

fore a long rain the weather is sultry, and that a single shower is always preceded by a warm disagreeable wind.

We are very particularly reminded of the approaching great monsoon in October by the oppressive heat we have in the calm evenings of that month, which, I am persuaded, would equal that of the land winds in May, if the atmosphere was not cooled in the latter part of the night by breezes that have wafted over extensive inundated plains.

I can refer, secondly, to my Meteorological Journal, according to which, the 4th of June 1800, at Madavaram, a place not far from Bangalore, the thermometer rose for a short time to 104° just before a slight shower of rain, and at a time when heavy clouds darkened the western hemisphere.

Farther, in the months of March and April, 1804, we had often at Bangalore, in the afternoons, strong gusts of wind from the eastward, which, in common, were styled land winds, and were really as hot and disagreeable as moderate land winds are in the Carnatic. I could have multiplied instances of this kind, but

am of opinion that in a fact so much known it would be perfectly needless.

The last refuge of the defenders of this theory is the vallies of the Ghauts, in which they pretend the heat is generated by the concentrated and reflected rays of the sun.

I will not deny but the heat occasioned by these causes may contribute much to raise the heat of the land winds ; but the sudden appearance of the latter, their usual strength, and abrupt disappearance, all militate against that explanation as a principal cause.

The heat of these winds should in this case, to say a few words more on the preceding subject, decrease regularly from the point where it is greatest towards the opposite, on both sides, as is the case on the coast of Coromandel. On the contrary, we find that, immediately on our having ascended the Ghauts, or on the top of hills* elevated above the clouds, we have escaped their heat all at once.

* Major Lambton, at the top of Carnatighur, one of the highest hills in the Carnatic, about three thousand two hundred feet above the level of the sea, found, in the middle of the land wind season, the thermometer at 79° and 80° in the

It is hereby remarkable, that the direction of the wind remains to appearance nearly the same every where. In Mysore, for example, the wind is, in the land wind season, west during the greater part of the day; in the afternoon it is from the east, and commonly warmer than the former.

This, together with what had been said before, will, I hope, be thought sufficient to establish my opinion relative to what *can not* be the cause of the heat in the land winds.

It remains now to point out a theory, supported on a firmer basis, which I shall endeavour to do in the following pages. It is founded on a chemical principle, and will explain, I think, the heat of these winds in a satisfactory manner.

The principle itself needs no demonstration,

mornings, and, at noon, 82° and 84° , when it was below at 103° , and more.

This observation may be the more depended upon, as the Major remained for a considerable time on the top of this hill, in the pursuance of his most accurate survey, in the course of which he pays great attention to this as well as to all other points that could influence his learned labours.

as it is admitted as a general law; viz. that
“ all bodies, when they become more dense,
“ suffer heat to escape; or, what is the same,
“ they give out heat.” For example, when
gases or aëriform substances become vapours,
they discharge as much heat as was necessary
to keep them in their former gaseous state:
farther, vapours in condensing into fluids are
known to do the same, as also fluids, acquiring
solidity.

I am sorry that the quantity of heat set free
in the condensation of vapours required for a
pound of water has escaped my memory; but
I recollect it was very considerable. We
know, however, that a great deal of it is re-
quired for the evaporation of the same mea-
sure, and it is but reasonable to admit that the
same quantity with which it has combined
should be discharged on its returning to its
former state of fluidity.

In order to apply this principle to explain
the presence of heat in our land winds, I must
first observe, that the atmosphere in January,
February, and March, is perfectly clear and se-

rene; and then I will call to mind what has been said of the phenomena of those winds, that they are preceded by clouds on and among the Ghauts, and that a heavy shower of rain from that quarter announces their arrival; that during their continuance clouds are observed to lie on the Ghauts, and that the atmosphere, even in the low country, is hazy and thick. I must add also, that the countries west of the Ghauts are at this season frequently visited by heavy showers of rain, accompanied with much thunder and lightning, and sometimes with hail. Here in the Mysore country I have found the heaviest showers of this kind to come from the north west*, which is exactly in the direction of the countries remarkable for the great heat of the land winds in this season. At times, we have also showers from the east and south east, and my attention shall not be wanting to ascertain whether it is not at the

* The hottest land winds in this season (1804) at Madras were, I understand, from the north west, which corresponds with the direction from which the rains came in Mysore at that period.

time when the land winds blow hottest in the Carnatic. By this we see, that the clouds formed on the Ghauts, charged with water and electricity (by causes I am not now to investigate), are drawn to the westward, whilst the heat which, during the formation of these clouds, must necessarily be discharged, is carried to the east or to the lower parts of the coast, and causes the properties for which the land winds are so remarkable.

I have acknowledged already, that the heat occasioned by the power of the sun in this season, contributes to the aggregate of it in the wind; but I must observe also, that it acts only as a secondary cause, and passively, by preventing its absorption and diminution in the career over a variety of substances, particularly moisture, with which it would combine, if they had not been previously removed or incapacitated.

In colder climates, this absorption takes place in a greater degree, as substances are abundant with which the heat produced by the formation of rain, can combine and be-

come imperceptible*. It is, however, there also often remarked, that the heat of the sun in a cloudy day is more powerful than at any other time. In common this is ascribed to the reflexion of the rays of the sun from the clouds; but I opine it is oftener the consequence of the formation of water in the clouds, which obscure the sky at that moment.

It has been observed, that the heat of the land winds is not felt on the top of high hills, or on plains of a very inconsiderable perpendicular height above those in which it rages most violently; as for example, in Mysore near the Ghauts, which is only about five hundred feet higher than the vallies immediately below. This might be considered a weighty objection against my theory; as heat, considered in the light of an elastic fluid, expands equally on all sides; and from whatever cause

* Earl Dundonald's Treatise, p. 20. "The frequent changes in the degree of heat and cold in the atmosphere are to be ascribed more to the alternate disengagement and fixation of heat by chemical combination, than to the effects of the solar rays."

it proceeds, it should be supposed to extend even farther where it meets with less resistance, as from the air in higher regions, which is known to be lighter and more penetrable than nearer the earth.

But the reverse takes place ; for almost immediately above the clouds no other heat is perceptible than what might be owing to the nature of the climate.

This circumstance may be accounted for by the diminished density of the air in the lower parts of the country, produced by the heat of the season, which would naturally cause the wind to rush thither, with all its contents, and with greater impetuosity. The coolness of the atmosphere on elevated situations may be ascribed also to the evaporation of the uppermost strata of the clouds, which accompany the land winds.

Many arguments I have dispensed with, which might have been produced to elucidate and to establish my theory, as they were chiefly such as could be collected from simple inference, and from affirmative application of doctrines advanced before.

I will only add, that both the sirocco and samiel may be owing to similar causes as those which appear to be productive of the pernicious, or rather disagreeable, effects of our land winds.

ART. XIII.

CASES ILLUSTRATING THE EFFECTS OF OIL OF
TURPENTINE IN EXPELLING THE TAPE-WORM.

CASE I.

By JOHN COAKLEY LETTSOM, M.D. and President of the Medical
Society.

Read May 21, 1810.

Early in September 1809, I was consulted by J. P. Esq., about thirty-five years of age, on account of an uneasiness in the abdomen, with dyspepsia, which were supposed to originate from tænia, or tape-worm, as small portions of it had occasionally been evacuated by the rectum.

I prescribed a course of the male fern, with occasional cathartics, as recommended by Madame Nouflet. In this plan he persevered for the space of three months, in which period he discharged, at two different times, about eight yards of the tænia. In April 1810, he again applied to me, in consequence of labouring under his former complaints; adding that, he imagined, from the long use of the plant I had

recommended, his pains, and particularly the dyspepsia and general debility, had increased.

At this time I ordered the oleum terebinthinæ rectificatum, in a dose of nine drachms by weight, and after it a little honey to remove the heat and unpleasant taste it might occasion. In a week after taking the oil, he called upon me agreeable to my request, and gave me the following information; that, as far as he could judge, in swallowing this medicine, it occasioned less heat than would have resulted from taking the same quantity of brandy, or other spirit; and that the taste and heat it produced were soon removed by the honey.

In about three hours after taking this dose, a laxative motion was produced, without any discharge of tænia: but soon afterwards, with the second stool, more than four yards of the worm were discharged, and also a quantity of matter, resembling, as the patient expressed it, the substance and skins of the tænia. On the surface of this evacuation he noticed the oil floating, together with the tænia and the substance mentioned. It produced little or no

pain, and certainly much less than the purgative he had taken after the use of the male fern. The subsequent motions contained no tænia, nor any of the substance before noticed. He experienced no pain or heat in the urinary passages, though the urine continued to impart a terebinthinate smell for three or four successive days.

My patient has since remained in perfect health, enjoying a degree of comfort to which he had been a stranger for the preceding half year.

From this and other instances, I am induced to conclude, that the best method of taking the oil is without any admixture; and that the dose of nine drachms occasions very little inconvenience; and further, that this quantity, perhaps owing to its quick purgative effect, excites no irritation in the urinary passages, although it imparts its peculiar smell to the urine.

I do not recollect that it has been heretofore observed, that the oil has been evacuated in its original state. It might hence be inferred, that it is most efficacious when exhibited un-

combined, in which state it is not attended with any particular inconvenience.

It is well known that tænia may exist in a healthy state of the system ; and that hence its presence cannot be accurately ascertained by any other circumstance than the actual discharge of portions of the worm itself. Sometimes, indeed, there is felt a heavy pain in the epigastrium, attended with dyspepsia and emaciation ; but these are not pathognomonic symptoms, as they may arise from other causes.

CASE II.

By THOMAS HANCOCK, M.D. F.M.S., Physician to the Finsbury Dispensary.

Read May 7, 1810.

I HAVE used the ol. terebinth. in only one case of tænia. Jane Woodward, a poor woman, about forty-five years of age, first applied to me at the London Electrical Dispensary, some months ago. She had been for more than seven years afflicted in a very distressing manner with this complaint, and was

four times a patient in different hospitals; where, by the use of active remedies, she obtained temporary relief from pain, and frequently voided large portions of the tænia per anum. So soon as she had recovered a little strength, by indulging her appetite, after the violent operation of purgatives in these hospitals, her abdomen began to increase considerably in size, and small detached portions of tænia, about an inch or more in length, apparently endowed with life, continued to pass at times through the rectum; so that she was prevented from earning her bread, by this very distressing circumstance. She had generally recourse to purgatives on these occasions, and their operation had regularly the effect of reducing the size of the abdomen; but her disease continued. I may also observe, that, after these courses of medicine, she had less of rumbling in the intestines, and felt less pain, than when she freely indulged her appetite; for then, to use her own expression, “the worms appeared to gain strength,” according to the increase of her own strength.

About two weeks after the application of

electrical sparks to the abdomen, she discharged a portion of tænia, seven yards in length, without any appearance of head, which lived in cold water nearly three hours after its expulsion. Mr. Chamberlaine informs me he has known the tænia live nearly as long in water which was much above the temperature of the human body; a sufficient proof of the extraordinary tenacity of life in this animal.

Electricity was continued for some weeks longer; but as her pains also continued, and no more of the worm came away, my friend Mr. Chamberlaine kindly offered to try the effect of his electuary of the dolichos pruriens. The patient took this at first without, but afterwards with the scobs stanni in large quantities, and for a considerable time: but though, as she asserted, these medicines, more than any she had ever taken, relieved her sufferings, they produced no discharge of tænia.

I now heard of the ol. tereb. having been administered in this complaint, and resolved to give it a fair trial, especially as my patient was herself very anxious to use any remedy that promised the slightest probability of success.

I may premise, that her abdomen was enlarged as formerly, her stools slimy, and, in short, all her symptoms indicated that she had still large portions of tænia in her intestines. I ordered her at first small doses of this oil, viz. two drams twice a day, mixed with treacle to disguise its taste. This produced no other effect than an increase of pain and uneasiness, and particularly on going to stool, as if it irritated the rectum. The dose was now increased to half an ounce, at longer intervals. The first dose in this quantity, which she took without treacle, produced a little sickness and confusion of ideas, and afterwards operated as a purge. She complained of no uneasiness whatever in the urinary organs. After these doses, she passed such a quantity of slimy mucus, with such relief in all her painful symptoms, that she earnestly entreated I would allow her to take a double dose. The quantity of an ounce, which she now took, always produced a great degree of giddiness, as if she was intoxicated, which came on shortly after taking it, and continued for an hour or

more, until the violent cathartic effect which followed, removed it.

Although this medicine was repeated, after this manner, every two or three days for a fortnight or more, by her own particular desire, there was no appearance of tænia in her stools. I could not, however, but observe, that the mucus which was discharged so abundantly by the operation of the ol. tereb. sometimes exhibited the appearance of white films, as if the substance of the worm had been broken down. She took the very large dose of an ounce and half two or three times, after the medicine began to lose its effect, with results similar to those I have described. In short, by her own account, violent purging was the only thing that relieved her; and all kinds of strengthening remedies, as well as nourishing diet, uniformly increased her sufferings, so that she abstained from food when her appetite craved it, in order to avoid the anticipated pain.

I have since heard that she went in the London Hospital, and had again taken the ol. tereb.; for I strongly advised her to discontinue its use some time before she left the Fins-

bury Dispensary, having lost all hopes of its ultimately curing her.

CASE III.

By SAMUEL FOTHERGILL, M.D. F.M.S., Physician to the Western
Dispensary.

Read May 21, 1810.

A SOLDIER, aged about forty, applied to the Western Dispensary, the 28th of October 1809. He stated that he had been subject to tape-worm during the last four years, previously to which he had served with the army in Egypt, and attributed the origin of his complaint to the badness of the water which he drank in that country. He is now a private in the Middlesex militia. He complains of gnawing pains in the abdomen, irregular appetite, debility, and anxiety. He is somewhat emaciated, and his complexion is rather sallow. Whilst with his regiment, he had occasionally taken, by order of the surgeon, a variety of worm-medicines, and small pieces of tape-worm were passed at times; they even

sometimes came away alive, without medicine having been taken, and without a stool.

I directed him to take pulv. scammon. cum calomel. ℥j. every third morning. Two doses operated freely, but only a few very short pieces of tape-worm were brought away. I now directed him to take half an ounce of the oil of turpentine. He took it as ordered, November 9, in a little tea, sweetened with honey. In a quarter of an hour he was seized with retching, and in the course of the day passed four copious stools, in one of which was a tape-worm of several yards in length. The portion which the patient brought me I found measured four yards: he threw the smaller pieces away; but thought that altogether the length might be ten yards. The worm was dead, and had a livid appearance: the patient remarked that the pieces which formerly passed from him were of a whiter colour and brighter aspect.

The dose of the medicine was increased to six drams, and was repeated twice a week for the space of a month. During the first fortnight small pieces of worm continued to pass away, both after taking the medicine and at

other times ; but in the second fortnight the stools were natural, and contained no vestige of tænia. The remedy was consequently discontinued ; and the man called some weeks afterwards to acquaint me that he had remained entirely free from all symptoms of his complaint, and had regained his strength and cheerfulness.

He was generally a little sick after taking the medicine, and for a day or two was affected with a severe pain in the back part of his head, but complained of no other unpleasant effects from its use.

CASES IV. and V.

By GEO. BIRKBECK, M.D. F.M.S. Physician to the General Dispensary.

Communicated February 19, 1810.

DR. Birkbeck stated to the Society that he had administered the oil of turpentine successfully, to two middle aged females, who had long been troubled with the tape-worm.

In the first case half an ounce was given : no unpleasant sensation occurred whilst it was swallowed, but considerable confusion of ideas and vertigo, with a slight degree of nausea,

were soon produced. In a short time a discharge from the bowels took place; this was quickly followed by another, with which more than four yards of the worm were evacuated. The patient, in consequence of the frequent spontaneous escape of small portions of tænia, and the expulsion of a larger quantity about twelve months before by an active purgative medicine, had an opportunity of comparing the ordinary appearance of the worm with that which it now presented. Instead of being whitish, smooth, full, and in motion, she represented it to be dark-coloured, shrivelled, filmy, and lifeless. A second dose of the oil did not expel any more of the worm, nor, when he last saw her, about three months afterwards, had it again appeared. In that interval she had not been disturbed by any of the unpleasant feelings to which she was before subjected.

Considerable derangement of the general health and great pain in the pit of the stomach were produced by the tape-worm, in the second case in which the oil of turpentine was employed. Although one tea-spoonful only was introduced, sickness and acute pain fol-

lowed: this dose was repeated several successive mornings, always with the same immediate effects; but occasionally it was succeeded by the expulsion of large portions of the worm. The worm was represented to have the appearance before noticed. The patient had sufficient resolution and confidence to continue for some time the use of the medicine, and at length became free, not only from any further appearance of tænia in the stools, but likewise from all those sensations which had so long denoted its presence in the intestines.

CASE VI.

By JAMES SANER, Surgeon, F.M.S.

Read Aug. 10, 1810.

A WOMAN, about forty years of age, came to me in May last, very much agitated, having just voided about six or eight feet of tapeworm. She told me, that pieces had come away for the last seven years whenever she took a dose of jalap, which she had done that morning. She never found any thing to relieve her

so much as the jalap, though she had taken a great deal of medicine from respectable practitioners, and had also been under the care of a noted empiric for two years.

I thought this a good opportunity for trying the ol. tereb. rectificat. I therefore gave her one ounce with an equal quantity of syrup of saffron. In less than two hours she returned to me with about eight feet of the worm, with the head attached. She was very much gratified by this, as she had been told to look for the small black head. The medicine did not produce any very unpleasant sensation; merely a slight degree of nausea, a giddiness as if intoxicated, and a frequent desire to void urine, though without pain.

The day after, she complained of a feeling of emptiness in the stomach. I gave her the decoct. cinchonæ for a few days, which completely removed the sensation, and she has remained perfectly well ever since.

P. S. The woman informed me she used to eat raw meat formerly, as it seemed to ease her stomach more than any thing else; but

since she voided the worm, she has had no craving for it.

CASE VII.

By the same.

SINCE communicating the above, I am sorry to say I have had a case of tænia, where the ol. tereb. rect. has not so completely answered my expectation.

Being very sanguine in my opinion of it, in consequence of my former success, I mentioned the case to a relation of mine, who informed me he knew a labouring mechanic (a Russian) who had voided large pieces of tapeworm for a number of years. He persuaded this man to visit me, and I gave him the same dose I had given my former patient. It brought away a very large quantity, but so very soft that I could not measure it. As I could not perceive any thing like the head of the worm, I advised him to repeat the dose in a few days, which he very readily complied with, as he had suffered very little from the first.

I gave him the same quantity as before (viz. ol. tereb. rect. et syr. croci $\bar{a}a$ $\bar{3}j$). This produced violent retchings, tenesmus, strangury, and great pain in the back; the urine was also a little tinged with blood. The strangury and tenesmus continued nearly a week, and the patient was not able to work for several days after. As he had not voided any portion of worm with the last dose, I concluded that he was quite well, but requested he would call on me again in about two months. He called last week, and I advised him to try his old remedy (a drachm of jalap), which had its usual effect, in bringing away a large quantity of the worm. I fear I shall not be able to induce him again to try the ol. tereb., from the severe symptoms which it produced when he last used it.

Aug. 27, 1810.

ART. XIV.

SOME ACCOUNT OF THE LIFE AND WRITINGS OF
NATHANIEL HULME, M.D. F.M.S. LATE PHYSI-
CIAN TO THE CHARTERHOUSE.

By H. CLUTTERBUCK, M.D. F.M.S. &c.

Read March 13, 1809.

THE subject of the following narrative was one of the earliest members of this Society, and evinced on all occasions an anxious desire to promote its prosperity. He is entitled likewise to rank, in future, among the benefactors of the Society, by a liberal donation bequeathed to it at his death. While, therefore, his loss must be a matter of regret amongst us, I cannot doubt that some memorial of his character and writings will meet with a favourable reception.

Dr. Hulme was a native of Halifax in Yorkshire, and was bred to the profession of a surgeon-apothecary in the country. He was afterwards a surgeon in the royal navy, and while in this capacity on the Leith station, after the peace of 1763, he embraced the favourable opportunity which presented itself, of

prosecuting his medical studies at the University of Edinburgh, where he took his degree of doctor of physic in the year 1765. The title of his thesis was *Dissertatio Medica Inauguralis de Scorbuto*; a subject which was at that time very commonly chosen by naval practitioners for their inaugural essays. Shortly after taking his degree, Dr. Hulme came to settle in London as a physician, and at first devoted his attention to the practice of midwifery; but this he soon relinquished. In the year 1770, the *General Dispensary* (the first institution of the kind in London) was set on foot, and Dr. Hulme was its first physician. He was nearly about the same time appointed physician in ordinary to the *City of London Lying-in Hospital*. Both these situations he resigned many years before his death, and withdrew himself at the same time in a great measure from the active exercise of his profession. He did not cease, however, in his retirement, to cultivate science, and was particularly attached to the study of natural and experimental philosophy. Of this, he furnished ample proof in his numerous and ingenious ex-

periments on the light spontaneously given out by certain bodies, an account of which was published in the Philosophical Transactions of the Royal Society.

About the year 1774 or 1775, he was, through the influence of Lord Sandwich, then first lord of the admiralty, elected physician to the Charterhouse, a situation which he retained till the time of his death*.

Dr. Hulme's death was occasioned by a fall from a ladder, which he had imprudently ascended, for the purpose of superintending some repairs that were going on at the top of his house. He was much bruised by the fall; and the brain appeared to have suffered by concussion; for his ideas were observed to be slightly incoherent for several days after the

* The two physicians who in turn immediately preceded Dr. Hulme at the Charterhouse, enjoyed their situations for a very short time: they were both cut off by fever; and Dr. H. himself, shortly after taking up his abode in the house, was seized with the same malady, and in a manner so severe as had nearly brought on him the fate of his predecessors. The disease in these repeated and successive instances was ascribed to contagion; yet great care had been taken to eradicate this by ventilation and whitewashing, previous to Dr. H.'s entrance.

accident, which he survived only about a fortnight. He died April 25, 1807, at the age of seventy-five.

Dr. Hulme's retired and œconomical habits enabled him to accumulate considerable property, in the distribution of which by will he paid the most impartial attention to the claims of consanguinity. It is but justice to add, that, in the opinion of those who knew him most intimately, his parsimony was by no means the result of a sordid disposition to accumulate wealth, but sprung rather from a want of taste for the expensive enjoyments of life. To the *General Dispensary* he left a legacy of fifty pounds; and a similar sum to the *Medical Society of London*, of which, if not a founder, he was at least one of the earliest associates, and the prosperity of which he was always zealous to promote.

Dr. Hulme was the author of several publications, which are still held in considerable esteem. Of these, the following, I believe, is a pretty accurate list.

In the year 1768, he republished his thesis, with additions; to which was annexed a 'Pro-

posal for preventing the Scurvy at Sea.' The chief purport of this was, to recommend the use of orange and lemon juice, which had been found highly serviceable, as well in the prevention as the cure of that disease.

In 1772, he published a *Treatise on the Puerperal Fever*, a disease which about that time had proved extremely fatal in the metropolis, particularly in the different hospitals, and which his situation in the Lying-in Hospital had furnished him with ample opportunities of investigating. He ascertained, from repeated dissections, that the immediate cause of the disease was inflammation of the intestines and omentum. The occasional causes (after delivery) assigned are, too free an use of heating things, —an over-heated air,—breathing the impure atmosphere of an hospital,—mental anxiety,—a bad habit of body,—obstructed perspiration,—but especially, a neglect of keeping the bowels sufficiently open. Dr. Hulme did not believe in the spreading of the disease by contagion; a fact, however, which seems to be sufficiently established by other testimony. The principal remedy insisted upon for the cure is re-

peated purging, a practice which is known to have been attended with great success, and which serves to confirm the author's opinion of the proximate cause. This work contains a valuable summary of almost all that is to be found in authors on the subject of puerperal fever, from the time of Hippocrates downwards.

In the year 1777, he published the Latin oration which he had delivered before the Medical Society, according to annual custom, the title of which is *De Re Medica cognoscenda et promovenda*. In this are pointed out, with considerable force and elegance, the means best calculated for the advancement of medical science. A small tract was subjoined, entitled, *Via tuta et jucunda Calculum solvendi in Vesica Urinaria inhærentem*.

In the following year, 1778, an enlarged edition, in English, of the above tract was published, under the title of 'A safe and easy
' Remedy for the Relief of the Stone and Gra-
' vel, the Scurvy, Gout, &c.; and for the
' Destruction of Worms in the Human Body ;
' illustrated by Cases: together with an ex-

‘ temporaneous Method of impregnating Wa-
‘ ter and other Liquids with fixed Air, by simple
‘ Mixture only, without the Assistance of any
‘ Apparatus or complicated Machine.’ The
remedy here so much extolled, and in such a
variety of cases, was merely *fixed air*, or car-
bonic acid gas, which is proposed to be dis-
engaged in the stomach, by causing the pa-
tient to take, four times a day, fifteen grains
of salt of tartar (the sub-carbonate of potash of
modern chemistry) dissolved in any liquid,
drinking immediately after it as much of the
vitriolic acid, properly diluted, as might suf-
fice for the saturation of the alkali. A striking
instance is related of the efficacy of this re-
medy, in a supposed case of calculus of the
urinary bladder, where, after a few days use
of it, a discharge took place of a number of
stony fragments, with entire and permanent
relief of the symptoms. The utility of the
same remedy, in the other disorders mentioned,
is likewise proved by the evidence of clear and
well described cases adduced.

In 1800, Dr. Hulme instituted a great
number of curious and interesting experiments

on the *light spontaneously emitted from various bodies*, an account of which was published in the *Philosophical Transactions* of that and the following year. By the term *spontaneous light* is meant, that species of illumination which is occasionally observed to be emitted by various bodies, both animate and inanimate, under certain circumstances: as instances of the former may be mentioned the shell-fish called *pholas*, the *medusa phosphorea*, and various other of the *mollusca*. And, when deprived of life, marine fishes in general seem to abound in this kind of light. In the class of insects, many emit light very copiously, as several species of fulgora, or lantern-fly, and the glow-worm; also the *scolopendra electrica*, and a species of crab, called *cancer fulgens*. Rotten wood is likewise known to emit light very copiously. The object of Dr. Hulme, in his experiments, was to determine the laws of action of *spontaneous light*, as proceeding from different bodies; and to investigate its relations to other agents. A short account of the results which he obtained will not, perhaps, be deemed uninteresting.

The first series of experiments shew very

clearly that the quantity of light emitted by putrescent animal substances is not in proportion to the degree of putrefaction, as commonly supposed; the light beginning to shew itself before any of the ordinary signs of putrefaction appear. Indeed, as soon as a great degree of putrescency has taken place, the luminous property is destroyed.

It appears, from the next experiments, that the light thus given out is a constituent principle of the body, and may be separated from it: for when about four drachms of the flesh of a fresh herring were put into a phial with a solution of Epsom salt, after two days a lucid ring was observed floating upon the top of the liquid, and, on shaking the phial, the whole at once became beautifully luminous, and continued in that state.

The next series of experiments relate to the power which certain substances possess of extinguishing *spontaneous light*. A great variety of substances were found to have this effect; as water, both alone, and when holding various matters in solution; acids and alkalies; ardent spirits; even the neutral salts

when the water was fully saturated with them, although in a dilute solution they appeared to promote its escape, and to retain it. Thus, says Dr. H., we may take *light* and diffuse it through water, so as to render the whole most brilliantly luminous; or, in other words, to impregnate water with light.

From the succeeding experiments it appears, that though spontaneous light is extinguished by some bodies, it is not lost, but may be again revived in its former splendor. Thus, if it be extinguished by saturating the liquid with a neutral salt, it may be again made to appear by dilution. An extreme degree of cold likewise extinguishes it in fishes, in the glow-worm, and in rotten wood. It returns, however, with the return of the former temperature. Extreme heat was also found to extinguish it; while, by a moderate degree of heat, it was rendered more vivid.

Dr. Hulme next investigated the effects of different gases on spontaneous light. Oxygen gas was not observed to render it much, if at all, more vivid than atmospheric air. Azotic

gas was found to prevent its appearance, and, in general, to extinguish it. Hydrogen gas produced nearly similar effects, as did also carbonic acid gas. Sulphuretted hydrogen and nitrous gas were more powerful than the others in extinguishing it, and in preventing its appearance. Lastly, when the luminous body was placed in an exhausted receiver, the light quickly disappeared, but revived again on the admission of atmospheric air.

It appeared from other experiments, that solar light, when imbibed by what is called *Canton's Phosphorus*, is subject to the same laws, with respect to heat and cold, as the spontaneous light of fishes, rotten wood, and glow-worms.

In addition to the works above mentioned, Dr. Hulme was one of the editors of the "*London Practice of Physic*," a work that, with a certain class of readers, was at one time in considerable request. He also left behind him in manuscript, but in an unfinished state, an

account of an improved truss for hernia, a complaint under which he himself had laboured for many years, and which of course had attracted no small share of his attention. He had found by experience, that all the instruments in common use were defective in some material points ; and he studied much to render them more perfect. His invention, in the opinion of persons well qualified to judge, will be found an important acquisition to surgery. The paper he had drawn up on the subject was intended by him to be presented to the Medical Society ; and he shewed great anxiety, during his last illness, that it should be completed : with this view, he explained with much minuteness the particular construction and uses of his invention. The description of the structure and manner of applying this instrument being subjoined, it is unnecessary to be more particular.

The following paper, in the author's handwriting, was transmitted to the Medical So-

ciety by his executors, at his particular request, for the purpose of publication.

“ Charterhouse Square, 31 July, 1802.

“ *Nathaniel Hulme, to the Medical Society of London, sends greeting.*

“ I have left to the Society a chirurgical machine which I wish to be made known to the world as soon as may be, and in such a manner as may best redound to the honour both of the inventor and of the Society.

“ PALM-TRUSS.

“ I consider this machine to be of great importance to the public. It is a truss of my own invention, not yet made public, for the cure or relief of an inguinal hernia. I have named it a palm-truss, from its acting continually like the pressure of a hand, and it has been tried and found successful. The button is designed to fasten to a button-hole in the breeches waistband, as the breeches button does, and is of prime use; it keeps the machine always steady in every posture of the body, and prevents its slipping up or down,

and supersedes (either wholly or generally) the necessity of a thigh-strap. For this reason, if the herniac (that is, the person labouring under an hernia) should happen to be a female, she must wear drawers, with a strong and broad waistband; for the pressure of the waistband upon the machine should be always considered as the firmest and best pressure, and therefore there should be always three buttons to the waistband, in order to make it broader and stronger. The pressure of the instrument upon the hernia may be regulated by the springs, and there should be never fewer than three of them when of the spiral kind. The longitudinal springs are not so firm and steady, in their pressure, as the spiral, and are also apt to break, and therefore I prefer the spiral. If the machine be properly regulated, in all its parts, it sits as easy as a glove, and is no more trouble to the patient than that of putting off or on a sword-belt or girdle. Like all other new things, it requires at first some attention on the part of the patient, but a little practice will soon overcome all obstacles. In cases of inguinal hernia, though on one side only, it is best to wear two of these machines, by way of prevention,

because an hernia on one side is frequently succeeded by a second on the other side; besides, two strengthen the groins exceedingly, and remove all fear from violent exercise, or labour, or riding on horseback, &c.

“ *P. S.* The lighter the machine is made the better, and therefore let its plates be only so thick as to resist necessary pressure; and remove all superfluous iron-work. Let the pad or bolster be made with soft flannel doubled, and covered with a leather facing.”

REMARKS ON THE ABOVE: BY WILLIAM NORRIS,
ESQ., SURGEON TO THE CHARTERHOUSE, &c.

THERE are not many diseases that deserve the close attention of surgeons more than hernia. It is always productive of much inconvenience; often of great danger to the person afflicted by it; and it is of very frequent occurrence. The great variety of bandages and trusses that have been recommended by surgeons and ingenious mechanics sufficiently proves the difficulty of devising and constructing an instrument which shall possess the two essential requisites of preventing the descent of any part of the contents of the abdomen, and

of being worn with ease by the patient. Most of those now in use, that answer any good purpose, are cumbrous and heavy; their springs are sometimes too weak to give security; and they are often so strong as to occasion much pain.

The application of the truss, every morning, devolves generally upon the patient himself; and when it is considered that upon the correct adaptation of the pad to the proper spot, and preserving it there, its only use depends, its frequent failure ought not to excite surprise. There are other inconveniences attending the trusses now in common use, viz. the occasional breaking of the springs, the wearing out of the covering, and ultimately of the whole instrument. To the first of these, the negligent, although wealthy, sometimes fall victims by suffering the parts to remain unguarded until another truss be procured; but the poor and industrious labouring man has all the evils to encounter, with this superadded, that he is unable to purchase one. To obviate in some degree these dangers and inconveniences, the instrument herewith described appears to be well contrived. It will easily be seen that little anatomical knowledge is necessary for properly adjusting it to the part—that it is

not expensive in its construction—that it is much less liable to be displaced by the various motions of the body than the common truss—and that the degree of pressure may be just what the patient chooses. It is peculiarly adapted to old herniæ, where the opening from the abdomen is large, and which generally consist of a great portion of omentum and sometimes of intestine; and this is the kind of hernia which it is most difficult to keep up. Dr. Hulme having been himself the subject of hernia, had tried several trusses of the common kind without relief; and being thus driven to exercise his ingenuity, he happily contrived the present simple machine, which perfectly answered his purpose.

An intimate acquaintance with him, of more than twenty-five years standing, occasioned in me the highest respect for his amiable, virtuous, and benevolent character; one striking trait of which is, that on his death bed he frequently and anxiously desired that this invention, by which the sufferings of his fellow creatures, he hoped might be alleviated, should be made public.

Old Jewry,

W. N.

27 November, 1809.

APPENDIX.

DESCRIPTION OF A FEMALE URINAL, OR BED-BOAT,

For the Use of Patients that cannot bear a Change of Posture :

WITH AN ENGRAVING,

Communicated by a Corresponding Member of the Society.

Read April 30, 1804.

AMONG medical duties, one, and not the least important, is to alleviate human sufferings. When a fatal event cannot be prevented, its approach may yet be rendered less painful : the being able to render even such assistance affords some consolation to the sympathising anxieties of a physician or surgeon.

In some miserable cases, women cannot bear to be moved at all, on account either of a painful disorder or extreme debility. In these circumstances, the urine cannot be caught by any common utensil, but is permitted to wet the bed, and to excoriate the skin, so as to occasion or aggravate ulcers usual in these unhappy cases, and greatly to increase the complicated wretchedness of such a situation. To

every humane practitioner it must give satisfaction, if he can alleviate some part of such distress. For this purpose the Female Urinal, represented in the annexed drawing, was invented. On being placed in a proper situation, it caught the urine, without any change of posture or trouble whatever, and completely answered what it was intended to accomplish. Other means may have been employed to remedy the very disagreeable grievance here mentioned, but they have not come to the writer's knowledge. It may not be improper to communicate to the members of the Medical Society this method of giving some relief to an afflicted patient, though it may be doubted whether so simple and so humble a contrivance can merit a place in their Memoirs.

Explanation of the Figure.

	Inches.
Whole length	$8\frac{1}{4}$
Widest part	$3\frac{1}{4}$
Narrowest part one } inch from the end }	$2\frac{1}{4}$
The aperture in length . .	$4\frac{1}{2}$
————— in width . .	2

It contains ten ounces. The point of the vessel is bent a little downwards: the length of it might be increased so as to contain a pint or more*.

FURTHER OBSERVATIONS ON THE USE OF OIL OF TURPENTINE AS AN ANTHELMINTIC REMEDY.

THE President, Dr. Lettsom, informed the Society of his having employed the ol. terebinth. in two cases of ascarides, with decidedly good effect. The patients were children, and the remedy was administered by injection, in the quantity of two drachms, blended with a decoction of oatmeal. A considerable discharge of the worms followed, and no further inconvenience was experienced.

* It may be proper to add, that the bed-boat, formed of earthen ware; is sold at No. 5, Portugal Street, London.

DESCRIPTION of the PLATE.

FIG. I. represents the diseased scull, described at page 174.

FIG. II. The Female Uinal, or Bed-Boat. See Appendix, p. 245.

FIG. III. Dr. Hulne's Palm-Truss.

This Figure represents a truss for the left side.

A B C, an external oblong thin plate of iron, covered with leather: from A to B (being the upper edge when the instrument is in its proper situation) is about two inches, and from B to C about three inches.

E F G, a bolster formed of several folds of flannel, with a lining of soft leather, to be placed immediately over the ring: is fastened to an iron plate X Y, which is connected with the outer iron plate by leather straps, and by three spiral springs in the middle.

K L, a leather strap, about an inch and three quarters wide, to go round the body, and fasten to the buckle Q.

S T, the waistband of the breeches, with a button hole R level with its lowest button.

P, a button fixed at the lower part of the plate, to go into the button hole R.

W M, a strap to go round the left thigh, and, passing through V, to be fastened by the buckle N.

Any person may see the machine by application to the Society's House, Bolt Court, Fleet Street.

END OF VOL. I. PART I.

Fig. 1.



Fig. 3.

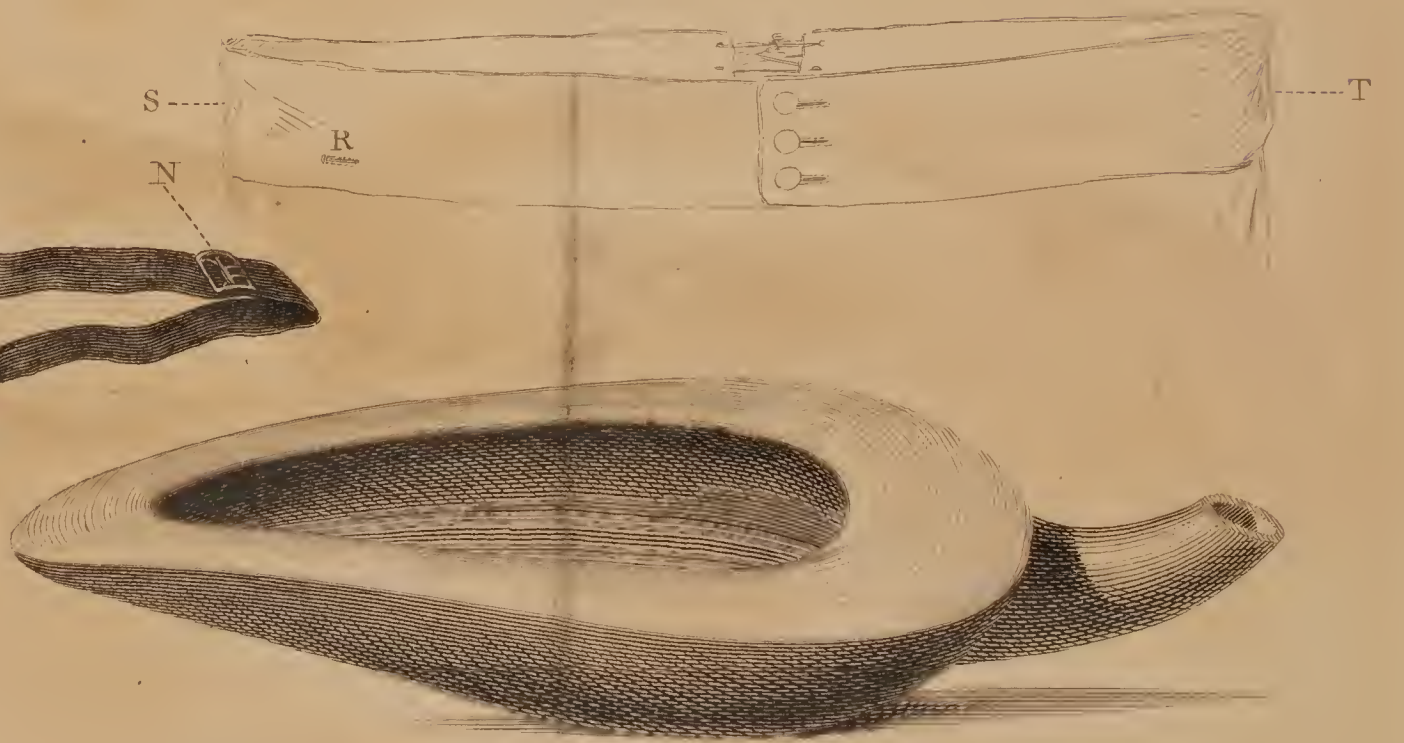


Fig. 2.

TRANSACTIONS
OF THE
MEDICAL SOCIETY
OF
LONDON.

VOL. I.
—
PART II.

LONDON:

PUBLISHED BY SHERWOOD, NEELY, AND JONES,
PATERNOSTER-ROW.

—
1817.

THE UNIVERSITY OF CHICAGO

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TRANSACTIONS

OF THE

Medical Society of London.

ART. I.

ON EPILEPSY,

By JOSEPH ADAMS, M.D. Physician to the Small-Pox Hospital, and to the Central Dispensary, and President of the Society.

THE following paper was made the subject of an anniversary oration before the Society so long ago as the year 1806. Its form is somewhat altered, and the lapse of nine years may have corrected the Author's mode of expression, but it has served to confirm his opinions,

THE ancients were more generally attentive than the moderns to one most important division of certain diseases. I mean the difference between their chronic and acute form. The Greek writers, in particular, were careful to mark this distinction in almost every disease; and modern authors, who have acquired celebrity for the accuracy of their descriptions, have

not been less attentive to it. The only division which Aretæus thought it necessary to make of diseases in general, was into acute and chronic, and what remains of his labours commences with an unfortunately mutilated account of the acute epilepsy. Sydenham has not been less careful in distinguishing the acute from the chronic gout, and Mr. Hunter has done much to relieve the sufferings of advanced life by the accuracy of his distinctions between the inflammatory and the spasmodic stricture.

Unfortunately, the celebrity of such names has not been sufficient to preserve these distinctions with sufficient accuracy. This is the more to be lamented, because a directly different treatment is often necessary in the chronic and acute form of a disease, known by the same name; and most of all, because the incurable nature of one form has induced some of the ablest men to despair of success in the other. This is so well known of epilepsy and gout, that they have both been called the *opprobria medicorum*, and the frequent return and long continuance of some strictures under every mode of treatment, is, perhaps, only less notorious as the disease is less obtrusive.

In my remarks on epilepsy, I shall, therefore, beg the reader's very particular attention to the two forms under which it appears, because by these it will be proposed to govern our prognosis and regulate our practice.

The acute epilepsy, on the cure of which only I have any thing to offer, is sometimes preceded by higher health than ordinary; at others, for a few days, by heaviness and an incapacity in the patient to arrange the objects of his attention with the usual accuracy. Oftentimes these will cease a few hours before the paroxysm, and be succeeded by an hilarity which, though part of the disease, will, by the friends, be considered as the cause. The first attack is most commonly at night, immediately after or during the first sleep, rendered more inviting and profound by previous exertion or a hearty meal. The patient is altogether insensible during the paroxysm, according to the severity of which will be his subsequent feelings. The duration is not less uncertain; sometimes he will have a temporary respite, during which the terrors of his mind seem beyond all description, till the paroxysm returns with the same violence as before, and with the same insensibility.

The symptoms are universal convulsions, with so preternatural a power in all the muscles, that the strength of several stout men is necessary to restrain the dangerous exertions of even a delicate subject. This muscular action is never uniform, but attended with those alternate contractions and relaxations from which the convulsions arise. The tongue and fauces partake of it so much, that sometimes the former is forced against the teeth with such violence as to bleed by its pressure against the sharp edges; or if the mouth happens to be open, the tongue will be thrust out before the teeth are closed with such force as to produce a painful division in its substance. The muscles of the abdomen, intestines, and bladder, are so contracted in the most violent form of the disease, as to force out the contents of these viscera, and it is said that the spermatic secretion is sometimes pressed out at the same time. The complexion of the skin, as well as the turgescence of the superficial veins, depends on the respiration of the patient, and probably on the irregular contraction of the heart. At one time the whole surface, more particularly the face, will have a dingy purple appearance, and the veins, especially of the neck, as is particu-

larly remarked by Aretæus, will rise much above the skin. As the patient takes a deep respiration these subside and the complexion recovers. In the mean while, the struggling for breath produces so strong a pressure on the lungs and bronchiæ, that the secretion is, as it were, pumped up, and the patient is said to foam.

The number and force of the symptoms depend on the violence of the paroxysm: the same may be said of its subsequent effects. At first, the patient falls into a profound sleep, or a condition similar to it: he awakes and appears wild and unconscious of all that has happened. When, however, he attempts to move, he feels a stiffness in all his joints; and, if he speaks, the state of his tongue, in some cases, explains every thing to him. In proportion as he recovers his reason, the impressions on his mind are more painful. Sometimes he continues for a few days deprived of reason, without inclination or necessity for food; at others, nearly in a state of idiocy painful to the beholder, and apparently attended with most distressing horrors to himself. From these he gradually recovers, and, excepting of the events during the paroxysm or of those immediately before and after it, his recollection is as perfect as before.

If the cause of the disease continues, however, the respite is only temporary, and the paroxysm returns sometimes with great regularity in its periods, though these may vary in different subjects. The most usual medium is from three to six weeks, but they have varied from a fortnight to a twelve-month. If the returns are frequent and violent, the patient has not time to recover his reason between them. Each succeeding paroxysm leaves him worse than before, till at length he becomes idiotic or maniacal, or dies apoplectic, during a paroxysm, or suddenly, without any marked symptoms.

Of such a disease, so well-marked and so formidable, there can be no difficulty in ascertaining the true character. If epilepsy is sometimes confounded with hysteria, this can only be in its chronic form, which shall be considered hereafter.

Examination of the head, *post mortem*, never fails to shew the cause of the acute symptoms, by exhibiting the effects of the actions which produced them. If a patient dies of any other complaint, after several acute epileptic attacks, the only difference perceived is in the texture of the brain, which is firmer

and more elastic than usual ; with the cavities somewhat larger. If he dies from the effect of a paroxysm, a considerable quantity of fluid is found in the ventricles of the brain, which is still firmer, with adhesions of the *pia mater*, and frequently considerable layers of coagulated lymph, more transparent or jelly-like than usual. If he lives sometime after a paroxysm, without perfectly recovering his reason, or with an evident alteration in his temper or character, yet, in other respects, reasonable, we usually find suppuration in the brain, either in different small abscesses, the matter of which has made its way into the cavities and to the basis ; or with a whole hemisphere so much altered as, in many places, to render it difficult to distinguish between pus and brain, or with one or more distinct abscesses contained in very thin capsules.

Such is the history of this dreadful disease, which has acquired, in different countries, names according to the impressions it has produced on the minds of the spectators. In the days of Hippocrates it was imputed, like many others, to supernatural causes. If the work *Περὶ Νοσῶν Ἰερῶν* is really as old as that physician, it must be admitted that he refutes such

an opinion by arguments which would not disgrace a much more modern writer. However, the impression of somewhat sacred attached to the disease seems to have been prevalent among the Greeks till their conversion to Christianity. The pythoness, in the Acts, was, probably, an epileptic female, similar to the sybil described by Virgil. Even the Jews, who had the benefit of a purer religion, could not divest themselves of supernatural agency, and, in one instance, the term lunatic,* is added, to dæmoniac, probably from the periodical returns of the paroxysms. As epileptics recover from their convulsions, and acquire the power of speaking before the full return of their reason, they utter many incoherencies, some of which must be true, and the rest might be interpreted according to the events which followed. Aretæus, however, adopts a name, not necessarily connected with supernatural agency, and the etymology of which is too simple to require notice.

Celsus, on this occasion, satisfies himself with the vernacular language of his country, *morbis comitialis vel major nominatur.*

* Σεληνιαζόμενος, Matt. ch. iv. v. 24, and ch. xvii. v. 15.

The late Dr. Heberden very justly ascribes the former of these names to the ill omen attached to the disease, and the consequent dissolution of a national assembly, if any person was seized with it.* Among the moderns, the Spaniards and Portuguese, besides the Greek term, have also *gota coral*. A very ingenious Portuguese gentleman assures me, that this is a corruption of *gota incuravel*, or incurable gout; but the Spanish and French Dictionary of Cormon, published at Lyons, derives the word *coral* from the latin *cor*. The Italians have for their vernacular term *morbo maestro*, or the master disease; the French have a somewhat similar expression, *le mal haut*; and the Germans call it *schwere noth*, or the heavy calamity. All these languages have, besides the above, the medical term *epilepsy*, and in most of them are expressions analogous to our *falling sickness*, (as *mal caduc*, *malo caduco*, *fallende sucht*.) This might lead one to suspect, that in this, as in many other instances, the vulgar have

* See his learned Commentaries, article Epilepsy. Aulus Gellius speaks of a certain day appointed for soldiers to be sworn in, *nisi* (inter alia) *morbis sonticus* auspiciūve quod sine piaculo preterire non liceat. — N. A. lib. xvi. cap. iv.

been more correct than the learned, and that they distinguished the chronic disease merely by the sudden *falling*, whilst the acute form was viewed with so much terror as gave rise to expressions they seemed fearful of defining.

The proximate cause of acute epilepsy does not appear to have been sufficiently sought for in the only way in which it could be discovered, by comparing the symptoms with the appearances after death. Hippocrates imputes the whole to a redundance of *pituita*. This opinion, venial in his days, seems to have revived in our own times; at least, it is difficult any other way to account for some late remarks on the *pituitary* gland, published on the continent, and transcribed into some of our English journals.

On a review of all the symptoms of acute epilepsy and of the appearances after death, I have no scruple in referring the whole to inflammation in the substance of the brain. No one is ignorant that in many epileptic subjects no change has been observed in the appearance of that organ; there are, however, many authorities on the contrary side. It does not, therefore, seem unfair to impute this difference

to the different forms of a disease, too often included under one general term.

The brain is, if possible, more guarded against injury and spontaneous disease than any other part. Its great importance and its extreme delicacy point out the necessity as the cause of these provisions. Against the first, its bony case is admired by every pathologist; against the second, the whole structure and arrangement of its blood vessels seem particularly directed. The principal means by which the functions of any organ in the living body are impeded, besides external injury, are hæmorrhage and inflammation. Hæmorrhage, in the substance of the brain, seldom fails to produce apoplexy or partial palsy. Inflammation, if continued, destroys the patient by effusion of fluid into its cavities, or, by suppuration, the frequent termination of, and a means of relief in, inflammation of other parts, or by action excited and continued beyond what the powers of life can support.

To preserve the brain from hæmorrhage, the veins are not only more numerous and capacious than the arteries, but the sinuses are a most important provision. Hence, whenever the head is too full of blood, either from a

plethora or any mechanical obstruction, the capaciousness of the sinus's admits a considerable delay in its return, without injury to the structure of the brain. It would appear also, as if the internal jugular vein, besides its large area, were capable of greater extension than other veins, if Winslow's remark is just, that "though the largest of all that go to the head, it is not so large as it seems when injected."

By these salutary provisions, the brain may sometimes be loaded with blood for many hours and days with no other inconvenience than a heaviness or drowsiness of which the patient is very sensible, and the cause of which he often discovers. But, if this fulness is greater than the vessels can support, a rupture of one of them must follow, with the consequences already mentioned. To prevent this a further provision is made by the process of inflammation. The dangerous effects of inflammation, beyond a certain degree, have been pointed out; it now remains to be shewn in what manner inflammation, when necessary to prevent worse mischief, is conducted, so as to produce its salutary effects without irreparable injury to the parts.

Such is the progress of inflammation in that

form, which Mr. Hunter first called the *adhesive* state: a term now so general that no apology can be necessary for its adoption. It may not, however, be amiss to say a few words concerning its progress, particularly in the brain. The adhesive, then, is that kind of inflammation in which lymph is thrown out without any rupture of a vessel. This lymph by its adhesive property unites with great rapidity parts previously only in contact. It produces these effects, according to the structure of parts. When the vessels of the brain are so turgid as to endanger a rupture, the provision made is to strengthen their sides by the coagulated part of the lymph, which by its *adhesions* enables them to resist the effects of increased pressure. Hence the brain is firmer and more elastic; an increased quantity of fluid is also found in the cavities which are readily enlarged according to the capacity required of them. The danger from plethora is thus provided against; and, if not very considerable, the plethora ceases, by the effusion, by the violent actions which follow, and by the generally dejected state of the patient for a few days after; but, the brain has undergone the adhesive inflammation; that is, its substance is hardened by the coagulum, and its ventricles,

are enlarged by the increased quantity of fluid. This lymph and fluid, therefore, must be absorbed before the brain is restored to its healthy state.

Having thus gone through the history of all the symptoms attending an acute epileptic paroxysm, and also those changes which take place in the brain, so as to become what is called the proximate cause of these symptoms, it may not be a loss of time to compare the presumed cause and its effect.

The previous heaviness of the patient is the effect of plethora, which has rendered the vessels of the brain so full as to require the adhesive inflammation to support them. Inflammation is increased action. It is, therefore, attended with increased powers, or a greater capacity of bringing original powers into action; hence, the increased vigour and hilarity which sometimes immediately precedes a paroxysm. The same has been remarked by Sydenham, immediately previous to a gouty paroxysm, and is among the first aphorisms of Hippocrates relative to disease in general. But when inflammation is very considerable in any organ the customary functions of that organ are suspended. This is well known in the intestinal

canal, and in the kidneys. Even the muscles cease to act under violent inflammation, an effect extended to the muscles of the heart itself. From the cessation of the usual functions of the brain, we should expect a total insensibility to every impression on the organs of sense, and an entire extinction of memory, and such is actually the case as long as the high inflammation or epileptic paroxysm continues. But the muscles are put in action by stimuli and sympathy, without any consciousness of the mind. Hence, the great irregularity of their convulsive contractions, when they are no longer influenced by the mind and their increased violence, in contracting, probably, from the strong impressions conveyed through the nerves from parts of the brain under the increased action of inflammation. This violent action is, as in all other cases, succeeded by torpor, during which the patient is, or appears asleep. The rigidity of the muscles, for a few days after, is the necessary consequence of their violent exertions, and the dulness of the senses is the effect of the effused lymph. As the lymph is absorbed the functions of the parts are restored; thus the patient returns to his memory and reason in a greater or less time, in pro-

portion to the violence and length of the paroxysm, and the consequent larger effusion of lymph. Sometimes the quantity of lymph effused is so considerable that the whole is not absorbed before the periodical return of the paroxysm; in this case a fresh effusion takes place, and the quantity of adhesion in the substance, and of fluid in the ventricles of the brain, is thus gradually accumulated, till all memory is lost and the patient becomes idiotic. If suppuration has taken place the symptoms subside in part, but the patient is rarely perfectly restored. To the world the difference may not appear, but those immediately about him find his faculties impaired and oftentimes his temper altered. In this condition the continuance of his life seems to depend on the firmness of the capsules formed by the adhesive inflammation to contain the pus; if these are thin, they suddenly give way, and the patient dies apoplectic, or in an instant without any immediately preceding symptoms.

The above history, it will be remarked, is confined entirely to inflammation, excited in the substance of the brain, without external injury. If inflammation attacks the mem-

branes of the brain, the effect is, at first, intense pain, and, afterwards, phrenzy. If the brain is injured by mechanical violence, the consequence is coma or convulsion, and sometimes inflammation ending in suppuration, which either destroys the patient or injures the functions of that important organ.

The most common cause of spontaneous inflammation, or inflammation excited without external violence, is plethora, determined to a part from which there is not an easy egress from the body. Plethora is a frequent effect of certain changes produced at particular ages. During growth a larger quantity of nourishment is necessary, which sometimes produces plethora, when the growth is completed or even during its progress.* In certain parts near the surface, particularly the nose and the rectum, provision is made for relief from plethora, by the increased number of blood-vessels, and the facility with which they are ruptured and heal. If, at these times, the plethora is determined to the head without this relief

* Epilepsy, from this cause, is very common in young dogs; it is sometimes considered as *rabies*; at others the animal is killed from a mistaken wish of putting him out of his supposed misery.

epilepsy sometimes follows. As the changes in the constitution are completed, the cause and the effect cease together. Hence, at this age, a paroxysm or two, or more, sometimes occur, after which the patient remains free from any return. These and others occurring at a more remote climacteric, are the cases which have given celebrity to certain remedies. The first have also given rise to a very general error; namely, that if epilepsy occurs early in life it frequently ceases with the change which takes place at puberty. On the contrary, as the late Dr. Heberden remarks, if it commences much before that period it increases as the vigour of the body increases. Aretæus had before noticed that if it continues beyond the vigour of life it becomes chronic, and, without shortening life, only ceases with the patient's existence. On this account he confines his remedies entirely to the relief of the acute paroxysm, referring the cure of the disease itself, or the prevention of its return, to his remarks on the chronic disease.

With submission to an authority, of which I so gladly avail myself in the division of the disease, I shall consider every paroxysm acute which produces any of the consequences above

mentioned, but most of all, temporary loss of memory and its gradual return. These I can only impute to such a change in the condition of the brain, as may admit of restoration, that is, to the adhesive inflammation, the progress, termination, and sequel of which has been sufficiently dwelt upon for our present purpose.

When plethora has been the cause of inflammation there is great danger of its becoming periodical, and if such has been the case for any length of time, though the cause may cease, there is always danger lest an action, periodically induced in any organ, from any cause, should afterwards return at certain periods, without the cause which induced it. If the plethora continues periodical, we shall, under these circumstances, have an acute paroxysm at every returning period; but, if we have only a slight epileptic fit without subsequent loss of memory and the other sequelæ, the disease is now become chronic, and will gradually lose its periods. Under these circumstances only is acute changed to the chronic epilepsy, on which I shall say a few words hereafter.

Before we enter on the cure of acute epilepsy it may be necessary to remark, that

though I have illustrated the plethoric state of the brain as occurring at certain climacteric changes in the constitution,—yet, this is only to shew one frequent cause, and one which, as it ceases, may produce a cessation of the effect. It is well known that plethora arises from various other causes, and, whenever it is determined to the brain, the same consequences may follow.

During the paroxysm but little can be done; but, if the symptoms are very violent, the patient's muscular strength very much beyond his ordinary powers, and the paroxysm prove lasting, (that is, frequently returning after short intervals, during which the patient is furious, as above described,) it is absolutely incumbent to bleed him freely, in order to prevent extravasation, suppuration, or so high and continued a degree of inflammation as must destroy life by excessive and long-continued action.

If, however, as is most commonly the case, we are not introduced to the patient till the paroxysm is over, it will be much better to leave him gradually to recover. If this has been the first paroxysm, with all the marks of an acute character, our prognosis should

be favourable; but the patient and his friends should be taught the probability of a succeeding paroxysm in a few weeks, and, by way of precaution, in about three weeks it will be right to bleed him, to the amount of eight, ten, or twelve, ounces, according to his figure, age, or strength. If he recovers his health quickly, or appears peculiarly full of blood, or animal spirit, by symptoms of heaviness or unusual cheerfulness, the bleeding should be still earlier, with other evacuations, and a reduced diet.

If the patient has previously had other epileptic fits, much diligence should be used in ascertaining the probable periods of return, and any symptoms previous to each paroxysm. When these are determined, the bleeding should always be a few days before the period, or immediately on the appearance of such previous symptoms, and should be copious in proportion to the violence of the disease and the strength of the patient. At other times, no alteration need be made in the common mode of living, excepting that all spirituous or fermented liquors should be avoided. But, for a few days before the expected paroxysm, the diet should be farther reduced, purgative

remedies exhibited, moderate exercise only used, and fatigue of every kind avoided. If the feet are habitually cold great care should be taken in clothing them, and to warm them by exercise *at home*, which may be discontinued before it fatigues. The head and throat should be kept, day and night, as slightly covered as possible.

As long as the paroxysms are violent, and preserve any regularity in their return, more particularly if preceded by symptoms indicating their approach, our prognosis should be favourable. It will, however, be necessary to continue to watch the disease with much attention, for, at least, six months, and to continue the plan as long, if the patient's strength does not suffer. This does not often happen, but it should be carefully attended to; and, when the health requires it, between the paroxysms, tonic remedies with change of air will be highly proper, with no other restraint of diet, but abstinence from fermented or spirituous liquors, excepting when the period or symptoms threaten a return. It sometimes happens, that, by these cautions, if the disease has not been of long continuance, no subsequent paroxysm occurs, but more

commonly they occur at first in a milder form, about the usual period. Great care must now be taken lest the disease should become chronic, of which I shall say more hereafter.

When a patient, the returns of whose paroxysm have usually been from three to six weeks, has continued six months free, we may consider him cured; for though a paroxysm will sometimes occur afterwards if the regimen is entirely neglected, yet its second return may always be prevented by proper attention to the above means.

It may seem difficult to ascertain when these periodical bleedings and other evacuations should be discontinued, and it has been urged that the practice itself is likely to induce that very plethora which it is intended to prevent. I can only say I have found no such difficulties; the plan has been gradually laid aside, the bleeding first and purgatives afterwards; the patient has recovered with rarely any return, with none as long as attention has been paid to all the above cautions. When the paroxysms have returned, they have been permanently cured by a longer and more careful perseverance in the same plan.

The precise limits between the chronic and

acute form of many diseases are, with difficulty, fixed : in epilepsy with less than in many others, but it should be remarked that there is in most, even acute forms of the disease, something which may be called mixed. It will often happen that at the return of the period the first paroxysm shall be particularly violent ; this shall be succeeded by an uncertain number of slighter ones. All these should be considered as parts of the same. Another variety will sometimes occur ; namely, that at an uncertain period a slight paroxysm will be brought on by some association in the mind, with an event which occurred immediately before or after an acute paroxysm ; which event the patient will consider as a cause, and the presence of a similar cause will excite a similar impression on the brain, but without inflammation or any of its consequences. In inquiring, therefore, into the history of the disease, it is always necessary to keep this circumstance in view, and to calculate the periods only from the acute returns. An instance, among many others, occurred to me in Mr. Dollman of St. James's Street. This gentleman suffered all the symptoms and all the consequent distresses of acute epilepsy. There was sufficient regularity

in the return of the paroxysms ; but besides these he was subject to others so slight as to leave him without any subsequent ailment. These, he assured me were always brought on by the powerful effluvia of meat whilst roasting. On a more minute inquiry, I was satisfied that these fits arose entirely from an impression on his mind, after having experienced a violent paroxysm at the house of a friend with whom he was going to dine. These minor fits were, therefore, left out of the calculation, and by pursuing the plan proposed relative to the acute returns he perfectly recovered after four years illness, with most distressing despondency at the supposed incurable nature of a disease, from which he has now been nine years free.

This is not the place to dwell on the causes of chronic epilepsy ; but I am aware it may be asked, if the symptoms of the acute epilepsy are caused by high inflammation of the brain, how can we suppose that those of the chronic are not caused by a slighter degree of inflammation ? To this I have only to answer, that none of the symptoms subsequent to inflammation of the brain, appear, after a slight paroxysm, nor any change in the appearance of the brain of those who have for years

suffered from chronic epilepsy; hence, I conceive, either that there is no inflammation, or only inflammation so slight as to occasion no change in the brain sufficient to induce a change in its ordinary action, or to be detected by examination. One might suspect if inflammation, the symptoms of which are epilepsy, is usually induced by plethora, that whenever epilepsy arises from terror or from any other impression of mind, it would be unattended with inflammation. But this is not always the case, nor is there any reason why a violent impression on the mind, if it affects the head, should not induce inflammation of the brain. It must be admitted that there is some uncertainty in this. A servant of Mr. Barton's, tallow-chandler, near the City of London Tavern, was seized with the first fit of epilepsy on hearing of his father's death. The disease assumed the acute form, and the paroxysms were, at first, principally during the night: they at length attacked him in the day, and the first time I saw him was in the street of Cheapside. The disease had continued for two years, yet preserved its acute form with periods sufficiently regular to be treated as above. By these means, he was perfectly cured, and has remained well

for these last four years. Such was not the case with a boy, who was frightened into epileptic fits by the wanton pursuits of a fox-hunter with his hounds. This poor lad never could see a dog without falling into a fit, which had none of the acute symptoms, or consequences, or periods. I advised his mother to procure for him a young puppy, whom he might foster till it became larger and full grown; but the boy did not remain long enough in town for me to learn the event. It may be remarked, that, when a paroxysm occurs, for the first time, immediately after a painful event, we cannot always ascertain whether it should be considered cause and effect, or mere coincidence.

There is often great difficulty in persuading a patient to attend to the regular or expected periods. This will sometimes arise from his own inattention, but oftener from the suggestions of his friends, as there is a very general prejudice against bleeding, in what is considered a nervous disease; indeed, unless the disease has been of long standing, and the patient find the immediate advantage of the plan, it is hardly possible to persuade him, that any advantage can arise from bleeding

when he feels in perfect health. The only remedy for this, as in most other instances, is experience. If he is told that a paroxysm will arrive at a certain time, or after certain symptoms, provided he is not careful in preventing them, nothing more is necessary for his conviction than the completion of the prognosis. Senior Francisco Antonio, at the age of about twenty-five, was seized with acute epilepsy. I had kept off the third paroxysm, and persuaded him to prepare in the same manner against the fourth. Some good-natured friend, however, was more successful, for it is much easier for men without knowledge or principle to frighten than for others who possess both to persuade. It happened most fortunately for him that his paroxysm returned on this, as it had on one of the former occasions, to a day. Being sent for I found him just recovering with his feet in warm water, and his head covered with renewed sponges of cold vinegar; the only attempt I make in common to shorten the paroxysm or to prevent a relapse. From that time he was obedient enough, was readily cured, and, I trust, has remained well for these fifteen years. Another case was, —

Earle, driver of a hackney-coach. His paroxysms were particularly severe, and the disease had continued upon him for eighteen months. In this case it was thought necessary to continue the bleedings for several months after the paroxysms had ceased; and his wife a very intelligent woman, had been careful in marking every threatening symptom. One morning, however, with the characteristic surliness of his profession, he refused to attend to her cautions. She was so persuaded of his dangerous situation, that without his knowledge, she prevailed on her son to follow him. He had scarcely left the Gardens, in Clerkenwell, a cottage in which he inhabited, before a paroxysm came on violent in proportion to their long cessation and his consequent good health. I saw him about two hours after, at which time he had occasional remissions of his convulsions, during which he was perfectly mad. It required the force of three or four strong men to secure him so that a vein could be opened. He lost more than 40 oz. of blood, after which the paroxysms became milder till they ceased; but he did not recover his reason for nearly a week. This severe lesson was the last trial he was put to: from that time he was

careful at each returning period, and as often as he felt any threatening symptoms. He has now continued well more than four years. I have dwelt the more on the cautions of the wife, because there is one previous symptom which is pretty constant, and which has given an erroneous impression to some medical writers. I have mentioned high health and more than ordinary hilarity as frequent forerunners of a paroxysm. To this we may easily conceive that *coëundi cupido* should be added. The indulgence of this has been considered the cause of a paroxysm,* whereas the condition is only a symptom of the disease, and I conceive there would be greater danger in restraining its indulgence in married men who are accustomed to it.

I cannot quit this subject without one important caution, which is, that it is adviseable, for a time at least, rather to encourage this periodical plethora, than to prevent it. As long as the periods are regular we can prevent their usual effect — the paroxysm, by superseding them in the manner described. But if the disposition to plethora continues, without maintaining such certain periods, there

* See Boerhave, Sect. 1075.

is always danger lest the paroxysm should invade us before the patient is sufficiently aware of the previous symptoms, if any exist. It has been urged, that, where there is a disposition to plethora, that disposition may be altogether counteracted by evacuations and a reduced mode of living. But periodical plethora is no certain mark of general high health, and if we have paroxysms at uncertain times, with reduced health, there must always be danger lest the disease should become chronic. Our first business is to prevent the usual effects of plethora in such constitutions; when this is accomplished we may make use of the methods above mentioned to prevent the occurrence of plethora, till we conceive the habits are so far changed as to render such cautions less necessary, or return to them if we find that the disease has returned, from our own or the patient's too early security.

Among the previous symptoms of acute epilepsy, I have taken no notice of the epileptic aura, as it is called by some, that is, of a sensation, commencing in a certain part of the body and gradually ascending to the head; first, because I have rarely met with it in the acute disease, and, never, unless it has been inqui-

red for ; and, next, because its occurrence is so immediately before the paroxysm that we can gain very little by a knowledge of it.

The whole of the above prognosis and treatment are applicable to the acute Epilepsy only. The disease is considered acute as long as the paroxysms are severe, and leave effects such as have been described. If the paroxysms are short, without previous notice or subsequent ill effects, the disease, however recent, cannot be called acute. Whatever etymological difficulty may seem to occur, it will not be easy to improve the terms, especially as the acute will sometimes change into the chronic form, and, if the early paroxysms of epilepsy are not severe, the disease is usually permanent.

Of the chronic epilepsy I have little more to say than to describe it. It occurs sometimes at regular, but more commonly at uncertain periods, rarely gives any notice of its approach, is of short duration, and after the subsequent repose the patient feels so little inconvenience, that it is often possible to conceal from him the whole event. The disease may continue through a long life, without affecting materially the body or mind ; no re-

medies that I have seen tried have produced any effect, and we rarely derive any information by an examination *post mortem*.

There are other forms of epilepsy, which, though sometimes acute and sometimes chronic, do not strictly come within the description of the first, as the paroxysms are excited by other causes than mere plethora; nor of the second, as there is sometimes a palpable cause for them. The first are caused by extraneous matter, formed within or pressing upon the brain. Hydatids are mentioned by Lieutaud and other writers; spiculæ of the skull and many other similar causes have been described. I have not had an opportunity of seeing these, but suspect that some cases of permanent idiotcy, attended with epilepsy at uncertain periods, may arise from such causes. I have also suspected the disease to arise from such causes when the paroxysms have been irregular and slight, compared with the length of time the patient has felt their effects afterwards, which have never entirely ceased. In these cases, as long as the patient has been able to express his feelings he has complained of head-ach, or vertigo, or dulness of one or more of his

senses, involuntary contractions of different, sometimes permanently of the same limb.

When chronic epilepsy is attended with that sensation, called the aura, it is always right carefully to examine the part at which this sensation begins. There are cases on record in which the patient has been relieved by removing a substance pressing on a nerve or tendon, or by altering the action of the part by means of caustics or issues. Not having seen any such cases I have no remarks to make on them, nor on the remedies recommended by different writers, in any chronic form of the disease. In this respect it is pleasing to stand on the same ground with that venerable character, whose industry and accuracy could only be exceeded by his integrity. "My experience," says he, "has furnished me with so little to say concerning the numerous anti-epileptic medicines to be found in practical writers, that I must let their merits rest on the characters of them which are there to be found."*

As little can I add concerning imitative or feigned epilepsy. The first, however, I should

* Heberden's Commentaries.

rather wish to treat by a removal from the source of imitation, than by terror, notwithstanding the well-authenticated history we have of the effect of heated iron.* On the latter I can only congratulate my country on the superiority of moral character among our young people, arising, probably, from the greater confidence with which they are treated. Individual instances no doubt occur, but in no part of the United Kingdom can we accuse our youth of that systematic deception, which De Haen mentions as common among the youth of both sexes in Germany; nor happily have we to deplore that corrupt clergy or grossly ignorant laity of which the same author speaks with such deserved contempt.†

But if we have no remedy on which we can depend for chronic epilepsy, it is one consolation to add, that the acute form, which alone threatens life or intellect, has, in every well marked case which has occurred to me, been cured in the manner above described.

* A. K. Boerhaave. † De Haen de Epilepsia, § iv.

ART. II.

OBSERVATIONS ON THE TREATMENT OF CROUP.

By HENRY BLEGBOROUGH, Esq. Surgeon.

Read February 7, 1814.

IT is agreed, on all hands, that croup is an inflammatory affection of the mucous membrane of the larynx and trachea; that it affects people of every age and of either sex, but chiefly children, from weaning to puberty; that it is very difficult of cure; that it runs its course in a few days; and that its termination is for the most part fatal, the patient generally dying, on the fourth or fifth day, from suffocation; that the tube of the trachea, on dissection, is found full of mucus so tough and firm as to resist the ingress or egress of air.

With this view of the disease, practitioners have almost uniformly employed, for its cure, all those remedies with which they are accustomed to combat, more successfully, inflamma

tion in other organs, this disease continuing intractable, and obstinately pursuing its course notwithstanding large and frequent bleeding, brisk and continued purging, and in despite of nitre, digitalis, the whole host of sedatives and antiphlogistics, starving and blistering. Such, at least, was the result in the few cases which fell under my observation in the course of my medical education:—with this estimate of the disease, and with this experience of the treatment, I attributed the ill success to an insufficient employment of the remedies, and accordingly they were all used more extensively and with greater perseverance in four cases which occurred to me, from 1801 to 1807, in children of different ages, from eighteen months to six years, but with no better success: the patients all died; I deem it unnecessary to occupy the time of the Society by a detail of the symptoms; two of the four I was permitted to examine after death:—in the first, a boy of three and a half years, who died on the fourth day of the disease, the membrane of the trachea was every where lined with a sort of inner tube adherent to it in every point, though requiring no great degree of force for detaching it; the circumference of this tube

was of firm texture, which became gradually more and more loose on approaching the centre, where it had the consistence of fluid mucus with which every part of the tube was filled, so as effectually to prevent the passage of air. The subject of the second case was a girl of two years, who died on the sixth day from the accession of the disease, and the appearances on dissection were such as in the former case, except that the inner tube was detached in much of its extent from the membrane of the trachea by an intervening lair of purulent matter. Notwithstanding the assurances of Dr. Cullen, that “bleeding, both general and topical, has often given immediate relief, and, by being repeated, has entirely cured the disease ;” notwithstanding that one or two of my medical friends had assured me, that they had succeeded in some single instance, chiefly by employing this measure, and that the remedy was in perfect accord with that theory to which I gave and do still give full assent ; I had lost all hope of overcoming the disease, by means which had so often failed me, and I anxiously sought after other remedies, which might, by possibility, be more successful.

CASE V.

On the 13th of October, 1807, I was called to see — Cave, a girl aged two years, she had the usual symptoms of catarrh, which continued without much variation till the morning of the 22d, when the cough, difficulty of breathing, and fever, were somewhat increased; the child had been frequently purged and had taken lact. amygd. with nitre:—on the 23d in the morning I was sent for early; the child had passed a very restless night, had much fever, hoarse and difficult breathing, and ringing cough; in fact, all the symptoms of croup; dissatisfied with the remedies which I had before employed, I wished, though with the same general intention of diminishing the force of the circulation in the first instance, and subsequently of effecting the removal of the collected mucus, if, in despite of every thing as before, it should be formed, to employ a different agency; and having seen the good effect of nauseating doses of antim. tartarizat. in keeping down the circulation and in taming the violence of athletic men, under the influence of maniacal attacks; I determined to rest my first intention upon this remedy, and to employ

full vomiting in the after stage, if my patient should arrive at it; accordingly, a solution of this medicine, in the proportion of gr. iij. to an $\frac{3}{4}$ of water, was given, to the effect of keeping up a continued and very distressing degree of nausea, from the morning of the 23d till about two o'clock P. M. of the 24th, during which time the circulation was very languid; there was, of course, no disposition to take sustenance of any kind, and the disease certainly, during this time, made no perceptible progress; I had not, however, the full confidence of the parents of this child, and I had certainly no cause to be too confident in my treatment of croup; I, therefore, readily assented to their proposal of taking another opinion, the result of which was the substitution of very rigorous purging with jalap and calomel for the nauseating process, a change with which the parents were much pleased, from the distress which the constant nausea occasioned. The effect of the purgatives was fully produced, but the disease rapidly increased, and the child died, from suffocation, on the evening of the 25th. On making this case the subject of conversation in the presence of a young gentleman, lately from Edinburgh, he informed me

that Dr. J. Hamilton, professor of midwifery, in that university, recommended frequent doses of calomel, but he could give me no account of the quantity of the doses, or of the frequency with which they were to be repeated. Having myself had the advantage of attending the doctor's class in 1779, I referred to my notes taken at that time, but could find only the following vague expression on the subject of this article: "Calomel has been warmly recommended."

CASE VI.

On the 16th of January, 1808, I was called to see Frederick Bidwell, of Paternoster-Row, Spital-Fields, a strong healthy boy of nearly four years. It was quite unnecessary to ask one question in order to determine the nature of his disease. He had, on the 15th, the appearances of having taken cold; but he went to bed without much complaint, passed a quiet night, coughed a good deal during the morning of the 16th, but his mother did not notice the unusual noise till three in the afternoon of that day; at seven she sent to me. The countenance was turgid, the shoulders were greatly elevated, the breathing very laborious, and the

sense of strangulation extreme ; tongue white, skin hot, pulse 150. I immediately determined to try calomel largely, in consequence of the above suggestion, and, because I did not know what better I could do ; not, however, without taking advantage of the debilitating treatment also ; accordingly 4 oz. (all that could be obtained) of blood were taken from the arm, a blister applied to the throat. Tinct. Digitalis gtt. x. were given every four hours, and a powder containing calomel gr. ij. sacch. alb. gr. i. was directed to be given with the greatest exactness every hour. January 17th, 8 A.M. 24 grs. calomel and 70 drops Tinct. Digitalis have been taken. The symptoms are as nearly as possible the same, the pulse also of the same frequency, no evacuation by the bowels ; continue the remedies. 18th, 8 A.M. has taken 28 grs. more calomel and 90 gtt. Tinct. Digitalis, the breathing considerably relieved, the cough, though frequent, much less harsh, pulse 124, tongue white, skin cooler, has had two stools of consistence and of a dark green colour, continue calomel, discontinue Tinct. Digitalis. 18th, 9 P.M. has taken 20 more grs. calomel, one stool of same appearance, crouping ceased, cough frequent, but loose, pulse

120, no medicine. 19th, 11 A.M. breathing easy, cough frequent, but more mild, he expectorates a sort of thin purulent matter, intermixed with pieces of firmer texture and darker colour, his countenance has lost the turgid appearance, and he seems quite at ease, pulse 108, appetite good, B— bound, capt. haust. purg. 22d, has continued to expectorate the same sort of matter, but the mass is now more uniform, resembling well-digested pus. The result of this case was very satisfactory; it shewed that croup was not, necessarily, a mortal disease; and I attributed the more to the calomel, because less blood was taken by two-thirds than in most of the cases which had proved fatal, and because the disease was to the full as violent as any which I had ever witnessed.

CASE VII.

November 22d, 1808, at three P.M. I was called to see John Ward, of Curtain-Road, a tall, thin, weakly, boy, of six years, who was suddenly seized on the morning of that day, with frequent, hoarse, and violent cough, long and laborious inspiration, with great sense of narrowing of the glottis, fever and thirst; tongue

clean, pulse 130, but not very full, bowels regular. I took from his arm 3 ounces of blood, when he fainted. I directed him calomel gr. ij. om. hor. to drink toast and water, diet gruel only. November 23, 11 A.M. has taken 30 grs. calomel, cough and difficulty of breathing the same, voice almost lost, noise on inspiration great, blood does not exhibit buff, heat considerable, tongue covered, pulse 138, no stool, continue calomel.—24th, 11 A.M. has taken 36 grs. more calomel; at six this morning the crouping suddenly ceased, cough frequent, difficulty of breathing much diminished, countenance cheerful, pulse 128, tongue moist, has had two stools of a dark green colour, discontinue calomel, haust. purg.—25th, draught operated powerfully, cough less frequent without much expectoration, breathing good, pulse 120, tongue moist, skin cool, appetite moderate, thirst abated.—28th, has expectorated a good deal of a substance resembling a mixture of pus and curd, which still he continues to do, though in less quantity; in other respects he is well.

CASE VIII.

F. Bidwell's second case, February 24th,

1809. Was, on the 23d, affected with the ordinary symptoms of catarrh, and, at four in the morning of the 24th, he alarmed his mother by the noise which she knew very well to be crouping; at six I took about 3 ounces of blood, and gave him ij. grains of calomel as before every hour; the symptoms of this case were similar to those of his former attack.—24th, 9, evening, has taken calomel gr. xxiv, and continues fully as bad as in the morning. 25th, 8 A.M. has taken 18 grs. more calomel, but labours exceedingly and cannot be considered in any degree better, has had a dark green stool. 25th, 9 P.M. has taken 20 grs. more calomel, and he has had several intervals of comparative ease, though the breathing is, at this moment, considerably difficult, yet it is obviously less violent than before; he labours less, the voluntary muscles are much less employed, the cough is somewhat loose and the countenance less turgid, pulse 134, tongue white, continue calomel, gr. ij. 3tia q.q. hora, has had another stool of the same appearance.—26th, 8 A.M. has taken only six grains more calomel, has had some sleep, the intervals of ease have been much longer, and the difficulty of breathing at no time so great;

he, at this moment, breathes with ease, has taken some tea and toast with appetite, pulse 130, continue calomel, gr. ij. 6ta q.q. hora, tongue covered. 27th, 10 A.M. has taken 8 grains of calomel, the crouping has altogether ceased, the breathing is free, cough frequent, with a little expectoration, pulse 122, tongue moist at edges, but loaden: haust. purg. March 2d, the cough has been considerable, and the expectoration of the same mixed appearance as before; in all other respects he is rapidly improving, had several stools from the draught. March 4th, cough somewhat abated; in other respects he is well.

CASE IX.

On the evening of Wednesday, the 10th of June, I was called to see ——— Cooper, of Princess-Street, aged five years. He had all the symptoms of croup to a violent degree, difficulty of breathing, and sense of strangulation excessive,—voice almost lost,—countenance turgid,—pulse 110 and full. Crouping began on Sunday evening, had been exposed to damp and cold the preceding Tuesday, had taken some simple medicines:—six o'clock, 6 oz. of blood were taken from the left arm, a blister applied

to the throat; 2 grs. of calomel every half hour;—nine o'clock, 8 oz. more of blood taken from the right arm.—11th, morning nine o'clock, has taken 24 grs. calomel, no purging, blister acted well, pulse still 110, but softer, breathing less difficult, continue calomel gr. ij. every hour; nine evening, pulse 112 and full, breathing easier, one stool not loose, 8 oz. more blood, continue calomel as before.—12th, morning nine o'clock, has taken only 24 grs. more calomel, pulse 110 and soft, breathing still easier, voice very feeble, continue the calomel; nine evening, symptoms relieved, P. jalap. grs. xv.—13th, nine o'clock morning, has had four green and loose stools, rept. pulv. jalap. and the saline mixture; symptoms as last night, has taken 12 grs. calomel, in all 60 grs. 14th, morning, two stools of the same appearance, symptoms as before; five afternoon, had, by the officiousness of friends, a glass of port wine, the crouping, difficulty of breathing, and sense of strangulation almost as great as at first, pulse 114 and full, a large blister, calomel gr. ij. every two hours.—15th, nine morning, symptoms somewhat relieved, pulse 110 and softer, continue the calomel; nine evening, has, on this occasion, taken 24 grs. of calomel, symptoms relieved, except the cough, which

is now more violent, attended with retching and the expectoration of purulent matter, rept. jalap. and saline mixture, omit the calomel.—16th, symptoms as before, pulse 130, extremities rather cold, two glasses of wine with water during the night.—17th, symptoms as before, pulse 138, extremities cold, Tinct. serpent. and wine, cough troublesome.—18th, symptoms about the same; pulse indistinct, extremities cold; died about nine o'clock whilst coughing.—19th, at one P.M. the parts were examined, the trachea being detached and divided, exhibited through its whole extent a surface unevenly ulcerated; in some points the ulcerations were of considerable depth, no adventitious membrane lining the trachea was discoverable. Whether this had been dissolved and broken down, or whether it had never existed, I do not pretend to determine. The bronchiæ and air cells, to their most extreme ramifications, were gorged with pus.

CASE X.

When I related, *vivâ voce*, the above cases to the Society, some of the members expressed a doubt of the disease being actually cynanche trachealis. When, therefore, on the 7th of July, 1813, William Tagg was brought to me,

I requested Dr. Laird to inspect the patient and superintend the process, with which he complied with great politeness and attention. This boy, aged four years and three months, having been indisposed for two or three days with a cold, awoke his mother at three o'clock on the morning of the day above stated, with the singular noise of cough and breathing. He was brought to me at nine A.M. The difficulty of breathing was extreme, on inspiration the shoulders were elevated almost to the ears, the countenance was livid, crouping long and shrill; yet, when he attempted to speak, the words issued in a whisper scarcely audible, he had a harsh and ringing cough, some fever, pulse 150, full and hard, tongue moist and clean, bowels bound, *mitte sang. ad deliquium*, (ʒ viij.) emp. canth, calomel gr. ij. *om. hora*.

Seven P.M. has taken 14 grs. calomel, no stool, pulse 140 and full, tongue a little white but moist, cough not severe, hoarseness and difficulty of breathing somewhat relieved. *Mitte sang. ad deliq.* (ʒ vj.) continue calomel. July 8th, 8 A.M. blood in both cases a little cupped, but exhibiting no buff, has had two stools dark and bound, pulse 154 and

weaker, tongue moist, breathing more difficult, countenance turgid, crouping very distinct, blister acted well, has taken 34 grs. more calomel, in all 48 grs. continue calomel.

It was now clear that the bleeding had not checked the progress of the disease. 5, P.M. at 9 o'clock, had a costive stool of a dark green colour, and at three another very large stool of the same colour, but more loose: at four the crouping suddenly ceased, and he fell into a quiet sleep, pulse 132, discontinue calomel, of which he had taken in all 72 grains; no medicine. 9 P.M. breathing less easy, though the noise from ingress of air is very much altered, voice almost lost, pulse 132, has been cheerful and is now asleep, cough frequent. July 9, 8 A.M. has passed a quiet night, breathing as at 9 last night, pulse 132, as he now lays asleep. 11 P.M. is now up and much the same in all respects, except that the pulse is 150 and smaller, cough frequent and loose, conveying to the ear the idea of a membrane partly detached and part adherent. 11th, 11 A.M. has continued in nearly the same state as at last report, has had no stool, mist. purg. and enema purg., has coughed up a small piece of mucus resembling half dissolved

glue. 12th, two stools, in other respects the same. 13th, no further evacuation by the bowels. Rept. mist. purgan. 14th, two stools; has, at different times since the 11th, expectorated a yellowish matter mixed with small pieces resembling curd; the cough is not now so frequent and is so altered in sound as to resemble more the hoarse cough of catarrh, than either the ringing cough of the seventh, or that described on the ninth at night; he eats heartily and plays as usual, though the voice is almost extinct. 20th, he has continued mending, though he is still weak and the voice not to be heard. 30th, is quite well, voice perfect, the return of the voice was gradual and some tones were distinctly given whilst others failed altogether, so that in making attempts one syllable issued loudly and with force, whilst the next fell to a whisper scarcely to be heard.

CASE XI.

Thomas Money, aged 11 months, still at the breast, was, on Friday, 3d December, 1813, affected with the ordinary symptoms of cold about five in the evening, he was hot, feverish, and restless; the breathing became difficult

and sonorous, inspiration particularly laborious, he had a hoarse and ringing cough; all these symptoms increased during the night, and when I saw him at nine, A. M. of the fourth, there was no question of his labouring under croup. I immediately took from the jugular vein, blood *ad deliquium* ($\bar{3}$ vj.); put a blister to the throat, and gave him calomel, (gr. ij.) every hour: from this time the disease did not increase, the breathing with slight shades of difference, and all the other symptoms, continued nearly the same till six P. M. of the 5th, when there was an evident amendment. The pulse was usually at or about 160; he had taken sixty-four grains of calomel, had had four stools of ordinary consistence, but of a dark green colour, the blister had risen well, breathing much easier, cough quite altered in sound, (giving the idea of a loose substance in the trachea) but still very frequent; from this time he recovered with little interruption, though he was a good deal feverish from the 8th to the 13th, which may be fairly attributed to the irritation of teething, three teeth having protruded between the fifth and the tenth days of the disease. His bowels were so much confined, notwithstand-

ing the large quantities of calomel which had been given, as to require active purgatives, and in quantity: the calomel was discontinued. It was to be expected, that in a child so young any substance coughed up would be swallowed; along with the first stool, occasioned by the opening medicine, was discharged a large piece of tough matter, resembling consolidated mucus, which, however, I do not assert to have been the lining of the trachea; I only mention the circumstance.*

The result of the five successful cases above detailed, contrasted with that of those which have not so happily terminated, will warrant the conclusion, that calomel is the beneficial agent, yet it would be difficult to give a rationale of its *modus operandi*. It does not purge, it produces no ptyalism, it sets up no perceptible action that we can discover in any part distant from the trachea; it, in fact, produces no perceptible effect other than that of relieving the disease; it does not even prevent the disease from rising to a very considerable height; for in all the cases mucus seems to

* Dr. Clutterbuck was so good as to see this child with me.

have been largely poured out upon the membrane of the trachea, without any check from the calomel for the space of thirty-six hours; its effect seems rather to be that of dissolving the disease before it has attained the fatal point, perhaps by detaching or breaking down the exuded mucus. Can it do this, by setting to work the absorbent vessels of the part? Though I have faith in the powers of calomel in this disease so strong as to attribute to it the good effects in the cases above detailed, I have not thought it right to omit bleeding, which, even if it be not necessary to the cure, is, at least, so far in conformity with the general indication as to be, in no way, hurtful; nay, even though alone, it may have no useful agency in the cure of croup, it may yet very beneficially prepare the system for the action of calomel, which action is understood, in the first instance, to be stimulant; we must say, then, according to the present admitted language, that the action of calomel in this disease is specific, but this is no more than what has been said before, viz. that it acts in some way which the present state of our knowledge will not enable us to explain. If any credit attach to this mode of treatment, I can have no pre-

tension to it. In mentioning the source from which I obtained the hint I have done that which candour demanded of me to Dr. Hamilton.

Dr. Rush, of Philadelphia, long ago extolled the good effects of calomel in croup, though I should think he had applied this name to some other disease than the *cynanche trachealis* of Cullen, as that disease will certainly not wait for the effect of *daily* remedies. “Our principal dependance should be upon this last
“ medicine (calomel); a large dose of it
“ should be given as soon as the disease discovers itself, and smaller doses given every
“ day while any of its symptoms continue.—
“ The bark is scarcely a more certain remedy
“ in intermittents than calomel, when thus
“ administered is in this species of cynanche.”

Calomel, in such doses as may be supposed here intended, would most probably purge, and this circumstance would, in my view of the case, prevent the beneficial effects. I think it essential that it be given in such doses as to prevent its purgative effects, and indeed when given in doses of gr. ij. om. hor. it does not purge, but has quite the contrary effect, as is chiefly manifested in case X; indeed the

costiveness was so obstinate as to give cause to fear that *intus-susceptio* had taken place, an effect which some practitioners of name think not unfrequently to succeed large doses of calomel. In case XI, also, costiveness prevailed to a great degree. The precise quantity of calomel, necessary in any or in every case, I do not pretend to determine, but I am inclined to think that from sixty to seventy grains taken in thirty-six hours will be sufficient, and I believe it will not be necessary to continue the remedy longer than this, for in every case the amendment has been about this period so perceptible as to point out the safety of suspending the use of the remedy. Whether a smaller quantity of calomel, and how much smaller, would be sufficient I do not know, but I feel no disposition to trust to any smaller, for in none of the cases has there occurred any appearance to induce a supposition that it is in any way hurtful, unless its tendency to produce constipation should be so considered. The fever and uneasiness, which in Money's case continued from the 5th to the 10th day, may be fairly attributed to the protrusion of three teeth within that time.

It is unnecessary to observe that the sooner,

in this disease, the remedies are applied the greater will be the chance of success; but I am inclined to believe that at any period, prior to the end of the second day, we need not despair, because the disease seldom proves fatal till the fourth or fifth day, and thirty-six hours would seem to be sufficient for the calomel to produce its beneficial effects. The failure in Cooper's case may be attributed to the protracted period at which application was made; this boy too had been, for three days, under the care of an uneducated person, who, on the morning of the fourth day, being asked if the disease was not croup, said, he believed it was. The glass of wine, given on the 14th, obviously brought on a return of the symptoms.

That croup may and does occur in adults there can be no doubt, though it does so with less frequency, and the risk of a fatal termination is less. May these circumstances be accounted for by any change of conformation in the glottis or larynx at the period of puberty? or by the diminished vascularity of the membrane? M. Portal, in his very valuable work, entitled, "*Memoires sur plusieurs Maladies,*" tom. III. p. 40, says, "*L'angine suffocante qui fait perir si souvent les enfans, dont on vient*

“ de tant parler dans ces derniers temps sous le
 “ nom nouveau de croup, à été connue des anciens,
 “ et la maladie et les causes et les remèdes le plus
 “ employés même en ce moment. Bailou à ex-
 “ aminé quatre enfans après avoir eprouvé une
 “ suffocation extreme avec une voix glapissante
 “ et après avoir rendu des fragmens membra-
 “ neux par l’expectoration. La trachée-artère
 “ était pleine d’une matiere petuiteuse et de con-
 “ crétions membraneuses. Ces concretions ne
 “ se bornent pas à la trachée-artère ni aux enfans.
 “ Si elle donnent lieu plus souvent au croup chez
 “ les enfans c’est que leur glotte est plus étroite.
 “ avant l’époque de la puberté et que chez eux
 “ les membranes muqueuses secrètent une plus
 “ grande quantité de mucosités.”

I have, in adults, seen no case in which the peculiar symptom, crouping, was present, though I have met with several in which the mucous membrane of the trachea was undoubtedly in a state of high inflammation, which, however, was subdued by the usual means, without the assistance of calomel. It may well be questioned whether calomel could be given to adults, in the large doses above-mentioned, with safety. Whether the operation of tracheotomy may, with propriety or advantage,

be performed in any case of croup I am incompetent to decide.—There is some interesting matter on this subject by Dr. Farre, in the 3d vol. of *Medico-Chirurgical Transactions*.

One other case of croup having occurred to me since this paper was presented to the Society, I take the liberty of mentioning it here.—The subject of it was — Newsam, No. 6, City Road, a girl of two years and two months. I was called at nine, P. M. Dec. 2d. 1814.—The disease was very strongly marked, the inspiration distinctly to be heard in the room above that in which the child was, and the cough so ringing as to resemble the barking of a dog. The child had recovered from measles about a fortnight, and had been taken out of doors for the first time since the termination of that disease, on the 28th November, a moist and cold day;—on the 1st December she became feverish, and was much distressed with cough;—in the evening of that day the crouping began, so that the disease had subsisted more than twenty-four hours when I saw her; the child was immediately bled, *ad deliquium*, about $\frac{3}{4}$ vi. of blood being taken from the jugular vein; two grs. calomel to be given every hour. Dr. Clutterbuck was again so obliging

as to visit this patient early on the morning of the 3d, the disease was still sufficiently well marked, though the symptoms had undergone a great and sudden amelioration at 4 A. M., when only 14 grs. of calomel had been taken; the remedy was continued, however, to 72 grs. with gradual abatement of the disease. In other respects this case resembles so much the one last related, that it would be useless to be more particular.—It may be asked whether the disease would not in this case have been cut short by the bleeding alone? or whether much less of calomel might not have been sufficient?

Though, in some of the cases, the little patients were left considerably weak, yet neither the degree or kind of debility was such as to induce me to think it should be particularly attributed to the calomel.—In this last case, however, the child was left with so much weakness, that I am disposed to think, that, in this instance, at least, much of it was due to the calomel, which was unnecessarily pushed too far.

H. B.

ART. III.

OBSERVATIONS ON CROUP,

By WILLIAM GAITSKELL, Esq. Surgeon, Rotherhithe.

Read October 6, 1810.

COMMUNICATED BY DR. LETTSOM.

TWO questions have been proposed concerning Croup:

First.—Do you think the Croup contagious, and is it more frequent now than formerly?

Secondly.—Is it more frequent in the northern than in the southern countries?

From all the writers I have consulted on the subject of croup, including Dr. Cullen, and from all the experience which twenty-six years practice has furnished, I am satisfied it is not contagious. Were it contagious like the small pox, scarlet fever, measles, and hooping cough, one-fourth, at least, of the infantile population would inevitably fall a sacrifice.

About the year 1792, two cases of croup fell, indeed, under my notice, which almost induced

me to think it contagious; but further experience has convinced me that my opinion was erroneous. These cases I shall briefly describe:—

Two children of the same family were attacked with the symptoms of croup, one about two years of age, the other three, and to both it proved fatal. Two little kittens which these children had fondled became equally affected; one lived three days, the other four, and I was permitted to examine their throats. The larynx and trachea of the children, as well as those of the cats, were obstructed by membranous exudation, with a mixture of purulent fluid. The membranous substance in the larynx and trachea of the cats was suspended like a tape worm from the aperture of the glottis, and the ramifications of the trachea were loaded with purulent matter, while in the children the larynx and trachea were coated with lymphatic exudation.

From a hasty view of these cases we might adduce them in proof of contagion, but we must reflect that we have no evidence of contagious effluvia producing so sudden an impression, and that the disease in the cats was nearly coincident with the children's, only

twenty-four hours intervening. Since this I have had opportunity of seeing about 120 cases of croup; many of these solitary instances in large families, and though no precautionary means were employed, each confined itself to the subject affected.

This disease, though not contagious, is endemic in some parts of Holland, North America, and Scotland, especially on the borders of the sea, while it is seldom to be met with in the interior.

With respect to its greater frequency in the present than in former times, it is difficult to speak with decision; but I am disposed to believe, from what has occurred to myself, as well as from the reports of others, that the croup is more extended over the southern parts of Great Britain than formerly. In proof of which I shall here introduce the following abstract of fatal croup cases taken from the Bills of Mortality, from the year 1760 to 1810, including a period of fifty years.

From the year 1760 to 1792, a period of thirty-two years, no croup cases are recorded; but from 1792 to 1810, a period of eighteen years, there are no less than 506. The subjoined is a table of years with the number of deaths corresponding.

64 *Transactions of the Medical Society.*

Years.	Cases.
In 1793	12 died
1794	21 ditto
1795	17 ditto
1796	23 ditto
1797	14 ditto
1798	14 ditto
1799	16 ditto
1800	13 ditto
1801	14 ditto
1802	27 ditto
1803	25 ditto
1804	23 ditto
1805	29 ditto
1806	44 ditto
1807	57 ditto
1808	76 ditto
1809	81 ditto
	Total . . <u>506</u>

This shews a considerable increase in the last four years, and as this disease is so formidable in its nature, that more than one-fourth of all the children who are attacked, perish under the best of treatment, it furnishes us with a knowledge of its extension in the southern distinct.

The croup has always been more frequent in the northern than in the southern parts. It was first known and accurately described in Scotland. We have no English writer who furnishes a history of this disease till long after the year 1756, when Dr. Home, of Edinburgh, published the first correct account of it.

The disease called croup was not inserted in our bills of mortality before the year 1793, when twelve cases are reported.

Its universal prevalence on the coast of Scotland has been acknowledged for these sixty years; and Dr. James Hamilton, of Artillery-Place, Finsbury-Square, assured me that he had witnessed many children labouring under croup in Dunbar more than fifty years ago; that it was very general and very fatal along the whole eastern coast of Scotland.

Thirdly.—What are the most common accidental causes of Croup, and what are the circumstances which propagate it in one country more than another?

It appears, so far as my experience reaches, that the accidental causes of croup, are the

sudden application of cold combined with moisture to the delicate laryngeal membrane of an infant, which stimulates it to active inflammation, and produces lymphatic exudation with spasmodic contraction of the glottis. This will not appear improbable, when we consider the delicate structure of this organ, the irritability of its muscles, and the sudden change of temperature to which it is frequently exposed by the inattention of nurses, who imprudently convey infants from a warm parlour or nursery, to a cold bleak atmosphere, from thirty to forty degrees below the temperature of the air they previously inhaled. It was this sudden change of temperature that in my eldest son, inconsiderately exposed at fifteen months old, induced the croup, and had nearly terminated his existence. Twelve months after this, by a similar exposure, the same disease was renewed, and he was again rescued by timely, but active depletion. My youngest son, when three years of age, from a similar cause, was brought into imminent danger by the same disease, but recovered by timely assistance.

In every case where my attendance has been solicited, I have been able, on inquiry, to

trace it to cold and moisture. The same state of atmosphere which favours the production of croup, conduces to other phlegmasiæ; hence we often have, about the same time, catarrhal affections, bronchitis, pneumonia, hepatitis, ophthalmia, &c.

Two things seem necessary for the production of croup, the application of the occasional cause, (cold and moisture,) and a predisposition in the laryngeal membrane. This occurs most remarkably from the age of six months to the fourteenth year, and rarely at a later period. It is justly observed that this predisposition is strongest in children that are weaned, and the more recent the weaning the greater the risk. Beyond the fourteenth year the specific character of the disease is lost. Dr. Cullen marks the croupy tendency to prevail between the sixth month and the twelfth year; but Dr. Cheyne has seen a child labour under that complaint at three months old; and Rumsey as late as the fourteenth and fifteenth year. Dr. Sandyman assured me, that he had three times suffered from the croup in his own person, and the last time he was in his fourteenth year. My own experience does not afford me an example of this disease under

twelve months, nor later than the seventh year.

Though the croup is peculiar to infancy, it sometimes proves fatal to adults, by an extension of inflammation from the tonsils to the mucous membrane of the larynx. In this way *cynanche tonsillaris* has proved fatal by terminating in *cynanche trachealis*, while in the idiopathic croup of infants it originates in the trachea itself. It was this afflicting malady which terminated the life of the great General Washington, in America; and lately in this country two celebrated professional men, Dr. William Pitcairn and Sir John Macnamara Hayes, as appeared by the examination of the parts after death.

A severe attack of inflammation on the tonsils, uvula, and epiglottis, had nearly proved fatal to the writer of this paper, by propagating itself to the laryngeal membrane, but for the timely interference of copious depletion of the vessels, aided by the kind and very friendly attentions of Dr. Babington and Mr. Astley Cooper. In the *Medical and Physical Journal* for September, 1810, there is recorded a singular instance of inflammation being translated from the surface of the thigh to the membra-

nous lining of the trachea, and ending in the death of the patient. On dissection there was discovered a thickening of the mucous membrane of the larynx, which, by mechanical pressure and spasmodic affection, interrupted the respiratory process.

As cold and moisture combined, are, by general consent, admitted to be the occasional cause of croup; therefore, every situation of country which favours the exhalation of vapour, when a north wind prevails, will tend to make it endemial. This accounts for elevated places not being troubled with croup in any proportion to those bordering on rivers, canals, the sea shores, or swampy ill-drained grounds. It also accounts for its being endemial at Leith and not at Edinburgh; also in Holland and America, where the stagnant waters furnish such abundance of vapour to the atmosphere. I am inclined to believe that the greater frequency of croup in the southern parts of Great Britain, may, in some measure, be attributed to the modern improvements of cutting canals for inland navigation.

Fourthly.—What is the relative mortality of that disease?

The mortality of croup, in my own practice, has been, as nearly as can be calculated, about one in four. This is considerable; but it may probably be attributed to the disease making a progress beyond the power of controul, before the necessary assistance is solicited.

Parents and servants are unacquainted with the croup at its commencement, unless it has previously proved fatal in their families. Sometimes it begins as a catarrhal affection with a slight cough and hoarseness of two or three days continuance; but generally it attacks in the night suddenly and with great violence. I have known an artificial membrane of great firmness formed in the larynx and trachea, the very cast of the cavity, thirty-six hours after the attack, though several days are sometimes required for its formation.

For drawing of croup cases, see Dr. Baillie's *Morbid Anatomy*; also, Dr. Cheyne on *Croup*; also, on the *Pathology of the Larynx and Bronchia*.

Fifthly. What Treatment is best suited in England? Is it better to begin by emptying the Vessels before we proceed to other Remedies?

Sixthly. Is there any special Treatment for the Croup?

IN all cases of croup that have been entrusted to my care, I have endeavoured to arrest the progress of inflammation, to cause its termination in resolution, and to prevent the deposition of coagulable lymph; without the accomplishment of this it invariably proves fatal. I never remember to have witnessed one case of croup of more than twelve hours duration, ending favourably under any mode of treatment whatever. It is truly astonishing how soon the membranous exudation is formed, particularly when we consider the structure and office of the membrane which deposit it, being a secreting surface, and differently situated from any other membrane of the body of similar structure under the influence of inflammatory action.

When the mucous membrane is irritated to inflammation, the natural secretion is increased,

with some change in the quantity and quality of the fluid; but in croup, a membranous substance is formed, as well as a purulent fluid. In this it differs from the schneiderian membrane in catarrh, the mucous membrane of the bladder in cystirrhæa, the urethra in gonorrhæa, the rectum in tenesmus, and intestinal canal in dysentery.

Another thing deserving remark is, that the disposition of an inflamed laryngeal membrane to form the organized substance, is, as before observed, peculiar to a certain time of life, from the sixth month to the fourteenth year, and rarely at a latter period. This is the true idiopathic croup, the treatment of which I shall endeavour to describe, and not the symptomatic or spasmodic croup, which sometimes attends dentition, foul bowels, and other local irritations.

Were I treating largely on croup, I should feel it my duty to discriminate the idiopathic, symptomatic, and venereal, croups, with the pathognomonic symptoms of each, and the specific treatment adapted to them; but I shall confine myself to the inflammatory croup peculiar to children, or *cynanche trachealis* of Dr. Cullen, and described by authors in general.

From this view of the nature of croup, reason and experience shew, that the only prospect of success must be from copious depletion of the vessels, with counter-irritations in the neighbourhood of the part, and the promotion of the natural secretion. The indications are best fulfilled by bleeding, vomiting, blisters, the warm bath, and purging.

Bleeding should be resorted to in the very commencement of the complaint, and is most successful if performed in the jugular vein, though a vein in the arm will serve. Should syncope follow, the symptoms will immediately cease. But, as practitioners are often foiled in their intentions by the prejudices and weaknesses of timid friends, we are sometimes obliged to wave the boldness of our practice, and have recourse to leeches, always serviceable—but not so efficient. They are better auxiliaries than principals.

All these modes of bleeding, when timely employed, have answered my expectation, both separately and combined; the same has succeeded with others,—for Dr. Cullen, Dr. Alexander, Dr. Crawford, Dr. Ferriar, Dr. Cheyne, &c. advocate this identical practice.

When leeches are employed, their application

to the superior part of the sternum is preferable to the larynx, as the orifices sometimes bleed so profusely as to resist the most powerful styptics; and compression on that part is impossible. I remember one patient in the Finsbury Dispensary, under the care of my deceased friend Dr. Skeete, who died of hæmorrhage, from leeches applied to the throat. Since this, other instances have occurred. I have occasionally observed great difficulty in suppressing the hæmorrhage from leeches, even from the hands and temples.

When, by these means, the actions of the system are reduced, instead of the formation of membrane an effusion of mucus will be produced,—which, obstructing the tracheal tube, requires to be removed by expectorants. In this stage of the complaint active emetics must be employed, and the antimonial are the best for our purpose. About half a grain of tartar emetic dissolved in a desert-spoonful of distilled water should be taken, and repeated every ten minutes, till the action of vomiting is excited. Sometimes it requires many repetitions to accomplish this; for the stomach is so insensible in croup, that five—and even eight grains of tartarized antimony have been

swallowed before the object of our wishes is effected. The benefit of an emetic is considerable, it dislodges viscid mucus from the fauces, and aids expectoration from the trachea; while, by determining to the capillaries of the skin, it acts as a derivation from the local affection.

Blisters, as counter-irritants, are highly useful after the violence of the disease has been mitigated by general and local bleeding. They may be applied to the sides of the throat, nape of the neck, or upper part of the sternum. They assist by establishing a new action in the neighbourhood of an internal inflamed surface, which suspends its violence. In very fat children with short necks they are inconvenient at the throat, and better applied to the nape of the neck or sternum.

The warm bath should only be used after bleeding and vomiting; the temperature should be 96 degrees of Fahrenheit. The patient should be immersed from ten to fifteen minutes, then wiped dry, and put between blankets, to encourage a gentle diaphoresis. But, as a warm bath is not always procurable, much benefit will accrue from simply immersing the feet and legs in warm water, afterwards wiping them

dry, and wrapping them up in flannel. By these means the cutaneous secretion will be promoted, and the general circulation balanced. This will aid the great intention of preventing the formation of membrane, the principal danger in these cases.

Under the fifth part of our plan, viz. purging, I shall introduce calomel to your notice, which ranks so high in the estimation of some gentlemen, as to supersede every other remedy, bleeding included, and to be considered so certain in its curative powers, if properly administered, as to assume the appellation of specific.

One of the most powerful advocates for calomel in croup is the present celebrated professor of midwifery, in Edinburgh, Dr. James Hamilton, jun. he discards bleeding from his *methodus medendi*, and trusts to calomel alone.—The following extract is from his *Treatise on the Management of Female Complaints, &c.* 6th edition, page 363.—

“ A dose of calomel is now to be given, and
 “ repeated every hour till the breathing be
 “ evidently relieved, when it is to be gradual-
 “ ly discontinued, allowing, at first, two, then
 “ three, and, finally, four or five hours to in-
 “ tervene between each dose, according to the

“ state of the symptoms. This medicine com-
“ monly occasions both vomiting and purging,
“ and in true croup, the first alleviation of
“ symptoms generally follows the discharge of a
“ great quantity of dark green coloured matter,
“ (like boiled spinach,) by stool; but if the attack
“ has been that of spurious croup, the breath-
“ lessness ceases after vomiting has occurred.

“ The dose of calomel is to be regulated,
“ principally, by the age of the little patient.—
“ During the first year it should be from one
“ to two grains; during the second, two grains
“ and a half; during the third and fourth
“ years, from three to four grains; and during
“ the fifth and sixth, from four to five grains.
“ It may be given mixed with a little sugar in
“ a dry powder, or it may be mixed with cur-
“ rant-jelly or honey, but it cannot be given in
“ drink. I have had the happiness of seeing
“ the disease yield where its violence seemed
“ to threaten almost immediate death; and,
“ among the little patients on whom it has been
“ successfully tried;—one of five months old
“ had thirty-two grains of calomel within
“ twenty-four hours, and another of the same
“ age, the infant of an officer of excise, eighty-
“ four grains within seventy-two hours; a girl,

“ the daughter of a respectable tradesman
“ in College-Street, seven years of age, had,
“ within little more than sixty hours, one
“ hundred and thirty-three grains, and two
“ days after appeared as if she had never
“ had a complaint. In every case where it
“ was employed, previous to the occurrence
“ of lividness of the lips, and other mortal
“ symptoms, (amounting now to about forty,)
“ it has completely succeeded, both in curing
“ the disease, and in preventing any shock to
“ the child’s constitution. In these instances,
“ where the case seemed desperate, it was
“ thought right to try its effects, rather than
“ leave the patient to his fate.—It neither ag-
“ gravated nor mitigated the symptoms.

“ It is necessary to add, that I have now
“ seen two cases, when, although all symp-
“ toms of the croup were removed by the use
“ of calomel, the patients sunk from the weak-
“ ness which followed. One was an infant
“ nine months old, and the other a child four
“ years old.—Both cases were under the care
“ of the same practitioner, and he candidly
“ admitted that he had carried the practice too
“ far. When I was called in the vital powers
“ could not be renewed by the most powerful

“ stimulants. But, in another case to which
“ I was called, where the debility was very
“ great after the use of the calomel, the infant
“ was saved by means of a blister and a very
“ liberal use of opiates, and wine diluted with
“ milk. Those cases enforce the necessity of
“ carefully watching the progress of the dis-
“ ease, so as to stop the calomel whenever the
“ symptoms begin to yield. In a case where
“ croup occurred after scarlet fever, (a child
“ of a grocer in Richmond-street,) along with
“ the calomel a decoction of snake-root, the
“ favourite remedy of some American practi-
“ tioners, wine, opiates, and blisters, were
“ employed, and the child recovered.

“ For the cure of this formidable disease
“ practitioners formerly trusted chiefly to bleed-
“ ing, with the use of vomits and blisters as
“ auxiliaries; but the result of the practice
“ was, in the most favourable cases, a very
“ considerable shock to the constitution, and,
“ in the majority of instances, the death of the
“ child. These circumstances rendered it fair
“ to make a trial of giving calomel, first sug-
“ gested by some American physicians. Ac-
“ cordingly an old pupil recommended it to
“ me about eight or nine years ago, but I was

“ at first unwilling to try it, as he said it pro-
“ duced, in his practice, no other sensible
“ effect than curing the disease. After ano-
“ ther year’s experience, his report being still
“ favourable, I agreed to make a cautious trial
“ of it ; and having now employed it for seven
“ years, and having most accurately attended
“ to its effects, I consider myself fully war-
“ ranted in giving the above directions.”

Notwithstanding this strong recommendation of calomel by such a distinguished character, I am so prejudiced in favour of bleeding in the early stage of croup from a thorough conviction of its benefits, that since I became acquainted with the properties of calomel for the cure of croup, I have always preceded it by venesection.

Within these four months I have seen three cases of idiopathic croup, which yielded to bleeding, vomiting, blistering on the breast, pediluvia, and purging with calomel. The children were under six years of age, and took two grains of calomel every two hours till dark coloured stools were procured. By the time twelve grains were taken, three stools were obtained of a dark green colour. The calomel was then continued every four hours in the same doses, more stools were furnished,

and in forty-eight hours the disease terminated favourably.

Calomel was first given in North-America by Dr. Rush in very large doses, and with wonderful relief. After this Dr. Anderson, sen. of Edinburgh, tried it with success, and published some valuable cases of its effects in Dr. Duncan's Medical Annals. Dr. James Hamilton, junior, was first advised to make use of it by a West Indian practitioner, and by what I have selected from his works, seems satisfied with the practice.

Mr. Joseph Gaitskell, in the spring of 1806, was so prepossessed by what he had heard from Dr. Hamilton, in favour of calomel, that he solicited to try it alone.

In a few months, two cases offered to our notice, which I entrusted solely to his care, and no other remedy was employed. These children were brothers, the elder four years old, the younger two, and were attacked at the same moment of time. The elder took three grains of calomel every two hours, the younger two grains: when thirty-six grains were taken by the former, and twenty-four by the latter, some dark green stools were evacuated, with considerable alleviation of the

symptoms. By the time ten grains more were taken by the elder, and five by the younger, the disease was subdued, and required no further use of the medicine.

Having only these two cases of my own, which, under the specific action of calomel, terminate well, without previous bleeding; and, having seen two others, under very full doses of the same remedy, without bleeding, terminate fatally, I shall wait for further experience, before I change my system:—I have no hesitation in asserting, that, every case of croup may be cut short, by the plan proposed.

I find Mr. John Burns, of Glasgow, follows this practice; for, he says, in his *Principles of Midwifery*, at page 430, that, “the
“early detraction of blood, followed by an
“emetic, and the subsequent use of calomel,
“will afford the greatest hope of removing
“the disease. But I think it my duty to state,
“that, in some cases, no alleviation was ob-
“tained by any remedy but the calomel; and
“in others it was entrusted to it alone, and
“with success.”

Dr. Cheyne, in a recent publication, on the *Pathology of the Membrane of the Larynx*

and Bronchia, published in 1809, observes at pages 48 and 49, “ Calomel appears applicable to cases which arise during the currency of some other disease ; secondly, to cases of the disease extending beyond the usual period, of a nature, perhaps, approaching to a bronchial polypus ; thirdly, in cases where there are remarkable intermissions of the croupy cough ; when the child is seen for nights together, with many symptoms of croup occasionally remitting and intermitting towards morning.

“ But, although, calomel is to be relied on in these cases, I believe they are also to be cured by antimonial preparations. Fourthly, when the disease arises in children of a scrofulous condition, any substitute for the lancet is desirable. If the disease is not very urgent, large doses of calomel, repeated at short intervals, may be tried. Yet, in these cases, I have, certainly, seen the patient arrive at the second stage very expeditiously.”

With these extracts, which shew the different opinions of respectable men on the *modus medendi*, I shall conclude the fifth part of my observations on croup.

But, as in the second stage of croup, the extraction of the new-formed membrane, by the operation of bronchotomy, has been promised by some practitioners, I shall endeavour to explain in what species of croup it promises success, and in what it fails.

In all cases of idiopathic croup, of infants, bronchotomy is useless; but, as Dr. Cheyne has expressed sentiments so congenial to my own, I shall quote his words on the subject.

“ I would remind the reader, that the larynx
“ of a child, from three to twelve years of age,
“ is not more than three-eighths of an inch in
“ diameter; consequently, from the diminished
“ scale of the parts, the operator must be em-
“ barrased; bronchotomy cannot be perform-
“ ed in the usual manner between two of the
“ cartilages; to afford scope for the introduc-
“ tion of the forceps, a longitudinal slit must
“ be made, cutting the cartilages across, to a
“ considerable extent; and, in performing this
“ operation, there is considerable danger of
“ immediate suffocation, from the bleeding of
“ the thyroid veins. This objection is not spe-
“ culative; a respectable surgeon, who lately
“ assisted at the operation, informed me, that

“ the patient perished on the table, from the
“ irritation thus induced.”

I shall now describe that species of croup in which, as a last resource, bronchotomy should always be tried, I mean the venereal croup of adults. I have had an opportunity of seeing five cases of this disease, two recovered under mercurial frictions and cinnabar fumigations, and the other three died suffocated. In this species there is no membrane produced; but a venereal ulceration in the sacculus laryngis or on its border, which, by the secretion of pus, and excessive irritation of the muscles of the glottis, generally terminate life. Therefore, to allow time for the introduction of mercury to change the morbid actions of the part, and to establish that healthy disposition, which gives integrity to the organ affected, bronchotomy promises success, by giving vent to the matter secreted, and admission to the air, while the curative process is pursuing. In the instance of a woman, similar to this, I once performed the operation in the presence of Dr. Fox, and the woman lived six days, with every hope of final recovery; when, unfortunately, the nurses who had the care of the patient, became in-

toxicated, and neglected the aperture in the trachea, which suddenly clogged with pus, and suffocated her. The irritation of the trachea, after the operation, was such, as to refuse the introduction of a pipe; therefore the aperture was preserved by slips of adhesive plaster to retract the lips, and the matter occasionally removed.

The treatment of croup being concluded, it only remains to furnish such a list of authors as merit perusal by those who solicit to become acquainted with the perfect history and method of treatment of this afflicting and very fatal disease.

Cynanche Trachealis, Sauv. sp. 5.

Cynanche Laryngea Auctorum, Eller de Cogn. et Curand. Morb. Sect. 7.

Anginæ Inflammatoriæ, sp. 1. Boerh. 801.

Angina Latens et Difficilis, Dodon. obs. 18.

Angina Interna, Tulp. l. 1, obs. 51.

Angina Perniciosa, Greg. Horst. obs. l. 3. obs. 1.

Suffocatio Stridula; Home on the Croup.

Asthma Infantum; Millar on the Asthma and Chin-Cough.

Asthma Infantum Spasmodicum, Rush Dissertation, London, 1770.

Cynanche Stridula, Crawford Dissert. inaug. Edin. 1771.

Angina Epidemica, anno 1743, Molloy apud Ruty's History of the Weather.

Morbus strangulatorius, Starr. Phil. Trans. No. 495.

Morbus truculentus Infantum, Francof. ad viadrum et in vicinia grassans, ann. 1758. C. a Bergen, A. nova, N. C. tom. 2. p. 157.

Catarrhus suffocativus Barbadosensis, ann. 1758. Hillary's Diseases of Barbadoes.

Angina inflammatoria Infantum. Russel, *Æcon. Nat.* p. 70.

Angina polyposa, sive membranacea, Michaelis Argentorati 1778, et auctores ab eo allegati.

Cynanche Trachealis, by Disney Alexander. Dr. Ferriar's Medical Histories, vol. 3. p. 133.

Dr. Duncan's Annals of Medicine for the year 1799, p. 459.

Dr. Cheyne on Croup, 1801.

Dr. Cheyne on the Pathology of the membrane of the Larynx and Bronchia, 1809.

Transactions of a Society for the Improvement of Medical and Chirurgical Knowledge, vol. 2. p. 25, by Henry Rumsey, Surgeon.

Cullen's First Lines, vol. 1. p. 292.

Hamilton on Female Complaints, &c. edit.
6th, p. 358.

James Burns' Principles of Midwifery, p.
427, 1809.

ART. IV.

ACCOUNT OF THREE CASES OF EXTRAORDINARY PERIODICAL SICKNESS, TWO OF WHICH WERE CURED BY ARSENIC.

BY JOSEPH ADAMS, M.D.

Read April 17, 1815.

THE first of these cases occurred about thirty years past, but the event was so striking that it will not be thought hazardous if I trust to my memory for the more important incidents. A young gentleman from the west of England consulted me for, or rather conversed with me concerning, a sickness which had troubled him for several years, and for which he could find no relief. When I proposed a remedy he smiled, and was only prevailed on to try it by my remarking, that if it did not immediately,—or, at furthest, after the second paroxysm, produce an effect, I should expect no advantage from it. Once in ten days he was seized with a sickness which lasted for several hours, after which he gra-

dually recovered from the fatigue and uneasiness attending the most violent vomiting, and remained tolerably well for the succeeding nine days. At the end of that time the same sensations returned, and lasted about the same number of hours, and was followed by a remission of exactly the same number of days.

Conceiving that this might be one form of an intermittent, I gave him the arsenical medicine, at that time introduced by the late Dr. De Valangin. The succeeding paroxysm was much mitigated; and, by persevering for some time in the remedy, he was perfectly cured without a single return.

The next case occurred very recently. A married lady of consideration had been for fourteen years troubled with a sickness which returned precisely on the same day of the week. The nausea was so painful that she was under the necessity, for the whole day, of taking warm water; this, in a short time, was thrown up with a portion of mucus. For a few minutes after she experienced some relief, which induced her to continue the same portion as soon as the uneasiness became so great as to require the same assistance. In the course of the day, she frequent-

ly swallowed and returned from five to six gallons of water. During these fourteen years, she had produced a healthy child almost yearly. Neither gestation, however, parturition, nor her attempts at suckling had made any difference in her complaints. The only alteration she had ever experienced was, that one day she contrived, by the advice of her physician, to suppress her vomiting; but, on the following week, the sickness returned as before, and the recollection of her sufferings from her late attempt induced her to indulge herself in her customary relief from warm water. Another alteration was the change of the day from some little event attending a journey. The paroxysm was neither lessened nor increased by either of these changes. She had been habitually costive, for which she was under the necessity of taking pills, which long habit had not rendered ineffectual.

I thought it adviseable to begin with a brisker purgative, that, if the remedy should prove successful, she might not suffer from the cessation of increased secretion of mucus to which she had been so long accustomed. After this, she took three times a day five drops

of the arsenical solution. On the day on which she had prepared for her usual discipline, she was surprised to find the paroxysm milder, and of shorter duration. On the following day, she acknowledged that she doubted her own situation; being so accustomed to be ill, she hardly knew how to believe herself so much better. She persevered in her remedy, the dose slowly increased, and the slight paroxysm, just mentioned, was the last she experienced. For some weeks, she continued to take her medicine through Tuesday and Wednesday, perhaps longer than was necessary, but the recollection of her former sufferings made her fearful of desisting. I should have mentioned, that, during the time she continued the arsenic, daily, and in the largest dose, she had circumscribed desquamations in several parts of her skin, particularly her palms and soles. That this was the effect of the medicine, I had no doubt, having experienced the same on other occasions.* It ceased, however, during the short period that she intermitted the remedy, and whilst she was continuing to take it two days in the week.

* See First Edition of *Observations on Morbid Poisons.*

She has now continued free from her complaint more than a twelve-month, and has recovered flesh, strength, and spirits, all of which, as may be supposed, were much reduced, during fourteen years of weekly sufferings: sufferings—increased by the constant apprehension of their return, and the entire despondency of any relief, during a life which she had every other reason to wish might be prolonged. Since her cure, she has been delivered of a dead child, under many unfavourable circumstances, and has suffered a most painful loss in the death of a very near relation. Each of these incidents, for a time, materially affected her health and spirits; both have gradually recovered without any return of her former sickness.

The third was a dispensary case. Every one knows, that in that rank of life it is difficult to ascertain the precise symptoms, from the precarious mode of life with some of our patients, and the little knowledge they seem to possess of the importance of explaining the whole of their situation. This woman had been eighteen years affected with a weekly periodical sickness, attended, as I afterwards found, with a frequent head-ach, not only

on the day of her paroxysm, but at other uncertain periods. Her sickness yielded to the arsenic like the other two cases,—but the head-ach remained, for this she was cupped, and took other remedies. During the remission of the arsenic, her sickness returned again, and was relieved in the same way. Her head-ach, which had never left her, was relieved, but not cured, by cupping. There has been, however, such an irregularity in the attendance, and such an indistinctness in the account of this woman, that I dare not draw any decided inferences from her case.

ART. V.

CASE IN WHICH NEARLY AN OUNCE OF SULPHURIC ACID HAD BEEN SWALLOWED.

By JOSEPH ADAMS, M.D.

Read, April 24th, 1815.

IN the month of April, 1813, Mrs. ——— having procured about an ounce and a half of oil of vitriol, for some economical purposes, placed it on the mantle-shelf of her bed-chamber, in which room she was conducting her experiments. The vial being closed only with cork, its contents soon became black. At this period, she began to wean the first child, and on that account was directed to take a purgative medicine. This was also black, and deposited on the same shelf. In the morning, she requested her husband to give her the black dose on the mantle-shelf, not recollecting that the vitriol was of the same colour, and contained in a vial about the size for a common draught. The consequence was, that the vitriol was poured out, and the lady, in her great haste to swallow a nauseous draught,

did not discover her mistake till the whole was in her stomach. She then exclaimed that she had taken the vitriol. Her husband, in the first paroxysm of despair, left the house with no other covering than the night-gown he had on him, and in an instant repaired to his neighbour, Mr. Aldridge, a surgeon, in Pentonville. In the mean while, the lady attempted to swallow what water she could find within her reach. Mr. Aldridge, on his arrival, found her vomiting most violently a black liquid, instantly administered an anti-monial emetic, and afterwards olive-oil, with large quantities of warm water and kali purum. The vomiting continued incessant. The lady never perceived that the vitriol returned, but a quantity of black fluid proportioned to the thin liquids she had taken afterwards.

In about half an hour after the accident I arrived. The patient was in constant pain, which was of course much aggravated by her apprehensions of the consequences. The sickness was still more distressing. On examining the mouth and throat no appearance of excoriation or inflammation could be discovered, there was only an uniform redness, not higher than the natural colour in many subjects, but

particularly clean, being no where studded with a speck of mucus. Attempts had been made to introduce alkalies, but nothing would remain on the stomach, and the only relief the patient experienced was from warm water, which somewhat lessened the distress of vomiting.

In this manner she continued for three days, attempting to take broth, and also submitting to the use of broth injections, for the purpose of nourishment, as well as to relieve the sickness. The evacuations, *per anum*, were all of the same black complexion as the vomitings. In about a week's time she attempted to take solid food, but it soon returned, sometimes little altered, at others, tinged with black sordes.

About twelve days from the time she had swallowed the vitriol, she was seized with a more than usually violent paroxysm of sickness, whilst Mr. Aldridge was in her chamber; he endeavoured to assist her, and, as he held the basin, heard her exclaim, "O, the vitriol is come up!" To this but little attention was paid, as it was supposed to be nothing more than a fallacious opinion of the lady, in consequence of her vomiting being more acid than usual.

However, a few hours afterwards, Mr. Aldridge discovered a brown spot on the sleeve of his black coat, and, in the course of a few days, a hole equal to the spot, and several smaller ones in different parts of his dress. The patient had no question in her own mind, that, at that time and not before, she had discharged the oil of vitriol by vomiting.

Her relief, however, was inconsiderable, the sickness remaining nearly as distressing as before; the pain about the region of the colon as well as the stomach, truly excruciating. The evacuations upwards and downwards had the same appearance, but her appetite gradually improved. Every remedy which comes under the class of anti-emetic was exhibited, particularly the carbonic acid gas in every form; but, I could not ascertain that she experienced the least relief from any of them. Pipe clay was suggested, on the authority of a person who was said to have been relieved by it, under a similar event. But this seemed, if possible, to increase her distress.

After the three first weeks, however, it was found that the food remained somewhat longer on her stomach, and less of it came away unaltered. Her pain was also somewhat mitiga-

ted, as she slept more than two hours without interruption. In the course of another month she gradually so far recovered, that the vomiting was less frequent, returning only at stated hours in the day or night, or at a certain period after swallowing food. She also began to feel an inclination to eat, and to express some choice in her food. But, in the midst of this she was wasted to almost a skeleton; and, as soon as she became slightly convalescent, her feet and ancles were anasarcaous, with an incapacity to move them, and with intense pain.

In the month of July she was so far recovered as to take a journey, during which she continued to mend; her vomitings, though frequent, were unattended with pain, and almost without nausea, yet the food was often very little altered. On her return, in December, her appetite was proportioned to the loss of what she swallowed by vomiting, and her stools natural in colour and consistence. She had recovered flesh and spirits, and, by degrees, the vomiting occurred only once in twenty-four hours; the quantity was, however, very considerable, and the food but little altered. She has since perfectly recovered.

On a review of this case, I am aware that

considerable scepticism will arise concerning the length of time which the vitriol remained in the stomach; and, perhaps, concerning the possibility of a delicate female recovering from the violent effects of such an accident. I have, however, related the events as they occurred, with the authority on which each of them rests. I shall now add, that to me they are all satisfactory. The mode of accounting for them must be left to those gentlemen to whom we are so much obliged for their experiments in animal chemistry. From some of these we learn, that the vitriolic or sulphuric acid does not affect living animal matter, and that it coagulates mucus. If I am right in this, the above history may be explicable in the following manner: the vitriol was swallowed early in the morning, before any kind of food or drink had been taken to wipe off or dilute the mucus of the mouth, throat, or œsophagus. When received into the stomach it would coagulate the mucus with which it came into contact, and stimulate the stomach to secrete more. By these means it might have been contained in a number of cysts of coagulated mucus, or in one or two large cysts which might have been thrown up at the time Mr. Aldridge perceived

the stain and consequent hole in his coat. At the same time, it can hardly be expected that these cysts would be sufficient entirely to preserve all the acid from contact with the stomach, which, being denuded of its proper mucus, might be inflamed to a certain degree, and thus secrete a substance consisting partly of blood, which, when thrown from the stomach, has frequently this black appearance.

This suggestion will, I hope, be considered only as hints for the consideration of those gentlemen who have devoted so much time, and with so much success, to this branch of medical science; and, if any better solution of the difficulty should occur, I shall gladly receive it; at the same time, I should be sorry if the relation should excite so unjust a scepticism as to supersede all reasoning on the subject.

ART. VI.

A CASE OF LUSUS NATUREÆ OF THE FEMALE
ORGANS OF GENERATION.

BY WILLIAM GAITSKELL, Surgeon.

Read Nov. 11th, 1811.

COMMUNICATED BY DR. LETTSOM.

Mrs. S——, married, twenty-two years of age, of a dark complexion, short of stature, and rather corpulent, consulted me, in the spring of 1805, on account of a pain in her right side, accompanied with cough, spitting of blood, and general symptoms of fever; at the same time, I was informed that never having menstruated, she was apprehensive (to use her own expression) “*nature was coming through her lungs.*” Blood was taken freely from her arm, the bowels carefully attended to, and the strictest anti-phlogistic regimen pursued; and a speedy convalescence followed. But, the failure of menstruation depressed her mind beyond measure, and created the most anxious solicitude. Upon this I minutely interrogated her.

First, if she could remember any attack of pain in her loins returning at particular periods, with sense of weight and weariness about the hips?

Secondly, at what particular periods the glandular substance of her breasts became enlarged, and if shooting pains took place in them corresponding to those particular times?

Thirdly, if she were subject to giddiness or pains in the head, bleedings from the nose, lungs, or stomach, periodical or irregular?

To the first and third question she answered in the negative; to the second, that her breasts began to swell about the fifteenth year, and at seventeen were completely evolved. But, having one sister who failed to menstruate till the twenty-fourth year of her age, she felt no alarm for herself till the present very serious complaint.

I was now most earnestly entreated to bring down the menstrual discharge, for the re-establishment of her health and prevention of another hæmoptysis, without which, she observed, there could be no sound health, no progeny, nor comfort in the conjugal state, as every congress was attended with considerable pain.

Under these circumstances I proposed exa-

mination, *per tactum*, as well as an inspection of the parts, suspicious there might be a tough unruptured hymen, together with menstrual retention: to this she readily consented.

On separating the *labia pudendi*, the clitoris was discovered with its *preputium*, the *meatus urinarius* and *nymphæ*, all in a perfect state. Between the nymphæ from the inferior edge of the orifice of the urethra to the fourchette, there was a pale red corrugated membrane, which I judged to be hymen; but, on accurate investigation, it proved to be vagina, which, when unfolded by the finger, at two inches from its entrance, terminated in a *cul de sac*.

The case seemed so complicated in its nature, and the patient so desirous of relief, that I proposed to consult Dr. Haighton. When the doctor heard the history of the case, and inquired minutely into its circumstances, he gave it as his opinion, that there was, probably, a deficiency of uterus, or a very small and inefficient one. However, as nothing could satisfy the woman but some operation on the parts, we determined to pass two fingers up the anus, press the membrane forward between the nymphæ, and slightly scarify it with a lancet.

This was done with a view to ascertain whether this part was really the termination of the vagina or a blind end ; or, whether, by a repetition of the venereal act the hymen might have been elongated into a kind of canal of limited extent. In the latter case, the introduction of a probe might have led to some discovery of what might be situated beyond ; but, nothing like a canal could be discovered by the probe. Had the dilatation been made sufficient to pass the finger, something farther, perhaps, might have been explored ; but, apprehensions being entertained lest mischief should arise, this inquiry was not prosecuted farther. However, the most careful examination was made by the rectum for any substance like an uterus ; but without effect. Three months after this she informed us her conjugal connexion was more pleasant ; but no other benefit effected.

From this statement we may reasonably infer that the external organs of generation are perfect—the vagina imperfect—the uterus entirely wanting ; but, probably, some of the uterine appendages present and efficient. The external organs are proved to be perfect, by ocular demonstration—the vagina imperfect, by the introduction of the finger—the uterus wanting, by

the absence of menstruation or signs of that peculiar secretion. The ovaria present and efficient, by the evolution of the female character: her breasts being large, *mons veneris et labia* covered with hair, and an inclination for sexual intercourse.*

* In every instance of the ovaria being wanting the clitoris is small, the breasts flat, and there is a decided aversion to the other sex.

Mr. Charles Pears, in the *Philosophical Transactions* for 1805, describes the case of a young woman, named Ann Joseph, "who ceased to grow at 10 years of age, and was in stature only four feet six inches high. Her breadth across the shoulders was as much as fourteen inches, but her pelvis (contrary to what is usually observed in the proportion of the female skeleton) measured only nine inches from the *ossa illia* across the sacrum. Her breasts and nipples never enlarged more than in the male subject. She never menstruated; there was no appearance of hair on the pubes, nor were there any indication of puberty either in mind or body, even at 29 years of age; on the contrary, she always expressed aversion to young men who were too familiar with her."

Burns, in his *Principles of Midwifery*, note 46, quotes, from Morgagni, an instance of a porter's wife, in whom the uterus was found not above an inch long, and without any ovaria. The pudendum was extremely small, and there was scarcely any appearance of a clitoris.

Mr. Pott, vol. iii. p. 353, mentions a case of ovarian hernia (the only one on record) in which he extirpated both

The above narrative furnishes us with a *lusus* of the uterine system rare on medical record ; but not without parallel.

Baudeloque says,* “ in 1785, I had an opportunity of knowing a woman, aged 28, tall, and of a good constitution, in whom we could discover no indication of a uterus, however far we introduced the finger into the rectum, and depressed the hypogastric region with the other hand. A very thick membrane, which the repeated efforts for copulation had stretched, seemed to veil the entrance of the vagina ; and, when pushed into it with the finger, formed a kind of bag, an inch deep. This woman has most of the inclinations of our sex ; she loves hunting, cultivates letters, &c. and has never felt any thing which indicated a retention of the menstrual blood, nor even the necessity of suffering that evacuation. She is married, but does not give herself up to the duties of the

ovaria by ligature from the groins. He observes, “ that the woman has enjoyed good health ever since, but is become thinner and more apparently muscular ; her breasts which were large, are gone ; nor has she ever menstruated since the operation. Previous to this she was large breasted, stout, and menstruated regularly.”

* Vol. i. p. 214, Transl. by Heath.

female state, which she fills but imperfectly, and without taking any pleasure.”

Mr. Home* quotes, from Dr. Baillie's *Morbid Anatomy* a case of mixed organs: the person was 24 years of age, had the breasts of a woman, and no beard. The clitoris and meatus urinarius had the natural appearance, but there were no nymphæ, and the labia pudendi were unusually pendulous, containing a testicle in each of them. The vagina was nearly two inches long, and terminated in a blind end. She never menstruated, and had a masculine appearance.

Mr. Lucas, in his “*Remarks upon Peculiarities in the human Constitution, apparently arising from Disease before Birth,*” says, during my attendance as dressing pupil at St. Bartholomew's Hospital, in June, 1765, an unmarried woman, aged 29, was admitted, in hope of obtaining some relief for a singularity in her sex. The case was described by a surgeon, who remarked, that after being unable to discover any sign of an uterus, he had made an incision nearly two inches deep in the vagina, but without any satisfactory event. This patient was not

* *Phil. Trans.* abridged, vol. xviii. p. 492.

only examined by the medical gentleman belonging to the hospital, but also by many eminent accoucheurs. The general opinion appeared to be, that the uterus was not wanting, but that it was not in its usual situation, to which Mr. Pott added, that its size must be defective. The mammæ were in no respect different, except that the papillæ were somewhat larger than common. The clitoris was perfect.

“ The vagina was not one-third its usual length, but its fundus might be pushed a little higher; yet neither by that passage, nor by the rectum, could the least vestige of an uterus be traced. She had never menstruated, nor had she any symptoms of such discharge being retained. Her nose had for some years bled frequently, but not periodically; and, when that evacuation ceased, a cutaneous eruption spread over most parts of her body.”*

Columbus dissected a woman who always complained of great pain *in coitu*. The vagina was very short, and had no uterus at its termination.†

* Edinb. Practice of Physic, vol. v. p. 74.

† Burns' Principles of Midwifery, note 47.

These cases should all be recorded with the greatest accuracy, and not considered as matters of mere curiosity. They give rise to very interesting and useful deductions. Any one of them as a cause of permanent sterility might justify divorce, which in one instance similar to this Morgagni recommended to his patient.* Besides, if an imperfect vagina be mistaken for an unruptured hymen, and perforated boldly, peritoneal inflammation would ensue, and the patient might be consigned to destruction. The want of distinction between imperfect vagina without uterus, and imperforate hymen with perfect vagina and uterus, but small menstrual accumulation might lead us to error. Every practitioner should, therefore, satisfy his mind before he punctures the supposed hymen, that the signs of menstruation have been present, and some fluctuation been evident. Morgagni, on this important subject, observes, † “Cum igitur neutrum liceat pro certo scire; quis prudenter in his audeat, quasi uterum

* Morgagni was consulted by a barren woman, whose vagina was only a third part the usual length, and its termination felt firm and fleshy. He advised a dissolution of marriage. Vide Morgagni, 47th letter.

† De Sedibus et Causis Morborum, lib. iii. art. 13, p. 214.

inesse constaret, objcis, si forte occurrat, tollendi opus suscipere neque ad vitam servandam, neque ad ægrotationem ullam auferendam necessarium, et fortasse non modo inutile, sed etiam periculosum, præsertim si obex opponatur quem aut sedes, aut crassitudo quoque, et durities ostendant nec facile, nec sine magno discrimine tollendum? Duas ego fœminas scio (nam libro careo in quo tertia proponitur, a Cl. Caspare Bose* laudata; quartam vero imperforatam, et sine ullo quidem vaginæ vestigio, sed non sine aliqua tamen, quantumvis inutili, uteri adumbratione fuisse, lego†) duas, inquam, scio, quas sine utero in lucem editas anatome demonstraverit, alteram a Columbo nostro,‡ alteram a Cl. ejus cive Fromondo§ dissectam; ut hoc ipsum mihi indicio sit, multo plures ex iis quæ menstruo sanguine carerent, potuisse ab anatomicis absque utero inveniri; nam ut rarum hoc videatur, multo rarius videatur necesse est, si præter illas nulla alia fuisset, ambas Prosectoribus Cremonensibus obtigisse. Cum utrique illarum deesset uterus, via deerat

* Disp. de Obstetric Errorib. etc. § 7, in fin.

† Disp. Anat. ab. Hallero collect. tom. v. p. 227.

‡ De Re Anat. l. 15 in ipso fine.

§ Imperfor mulier, etc. Observ.

quoque pervia, quæ ad sedem uteri ferret; ut primam, cui vaginæ portio dumtaxat erat, cum priore de duabus quas ego inspexi; alteram, cujus erat vaginæ orificium imperforatum, cum altera liceat comparare. Visam à Columbo siqui Chirurgus incidere aggressus esset; viscus aliquod fundo illius vaginæ portionis attiguum simul incidisset, à cujus visceris compressione fortasse erat quod mulier *quoties cum viro coiret, mirandum in modum conquereretur.* Conspectam a Fromondo siqui scalpello curandum suscepissent; primum quidem septum obstitisset validum, firmum, et *fibris adeo solidis intertextum, ut ad cartilagineam naturam proxime accederet.* Quod dum vi adhibita persecarent, nihil facilius factu fuisset, quam ut vaginæ cavum subesse putantes, hujus parietes, quippe inter se coalescentes, et fortasse etiam adsitum ipsis rectum intestinum, aut vesicam urinarium convulnerarent.”

Instances of thickened hymen retaining large accumulations of menstrual blood are by no means uncommon. Dr. Haighton relates the case of one female of this description who conceived. The following case in Heister, if true, tells a different tale. “BECKERUS præterea, Medicus Hassus, peculiare ac lepidum

hac de re narrat *exemplum de lascivâ puellâ*, quæ clausa vagina ex utero matris nata erat. Hæc enim, postquam experimentis cognoverat, se a variis stuprari non potuisse, multos deinde et præsertim milites vegetos ad certamen venereum proterve provocavit; eos vero omnes, concubitus cum ipsâ rite celebrandi claustrumque sive munimentum hoc virginittatis perrumpendi spe frustravit atque emuncta pecunia, quod nihil possent, derisit. Tandem vero chirurgi cujusdam curæ se commisit, ut obstaculum illud concubitus impediens ipsi tolleretur. Hic autem curationem suam tam bene perfecit, ut paullo post hanc puellam imprægnaverit, et gemelli denique, quos peperit, felicitis suæ curationis et testes et sostrum fuerint.”*

* Heister, *Institutiones Chirurgicæ*, Pars ii. cap. 147, p. 1022.

ART. VII.

CASE OF THE VERMIS LUMBRICUS PERFORATING
THE INTESTINAL CANAL AND ABDOMEN.

By J. C. LETTSOM, M.D.

ELIZABETH GWILLIM, in her fifteenth year, of very fair complexion, consulted me in June, 1810. In the preceding year the menses had first appeared, and continued with some degree of regularity, till about two months prior to my attendance. At this time she had hectic symptoms, with a troublesome cough, and some expectoration, which gradually brought on an emaciated state of the frame, the abdomen excepted, which was large and tense, and continued gradually to increase, although more or less diarrhæa existed.

I considered this tumescence and hardness to result from a morbid enlargement of the mesenteric glands. The fulness occupied the whole abdomen, and pressed upwards upon the region of the liver, which might be felt,

without exciting a suspicion of hardness, or occasioning pain on pressure. The skin was without any tinge of yellowness; the urine not high coloured; nor did any symptoms indicate a morbid state of the liver, or of the glands of the neck.

Leeches were applied to the abdomen, and frequently the *fotus papaveris*; internally were taken the *pilula hydrargyri*, in small doses, and the *infusum rosæ* with *magnesicæ sulphas*. To prevent these from acting too powerfully on the intestines, already disposed to diarrhæa, small doses of *tinctura opii* were occasionally administered.

The cough and fever gradually subsided, and the tension of the abdomen had considerably lessened in the space of two weeks.

In July, on the right side, and a little below the navel, a circumscribed inflamed tumor appeared, somewhat larger than the dimension of a crown-piece, which, after the application of poultices and fomentations, assumed a suppurative process. It had increased to the size of a pigeon's egg, and was opened by Mr. Norris, surgeon to the Magdalen Hospital and Charterhouse.

It was noticed by him, that a puff of air

succeeded the exit of the purulent discharge, which then induced him to suspect that there was some communication with the intestinal canal, although no fæces escaped.

The base of the tumor could be felt and distinguished, from the general fulness of the abdomen; which, however, as has been observed, was progressively diminishing in hardness and size; the patient had acquired a gradual inclination to take more and more food, and appeared to be gaining in flesh. On the 8th of August, a large *lumbricus teres* was discharged per anum, without any particular variation in the general symptoms, though with the continuance of amendment just noticed. She was now able, for the first time, to walk from her bed, but not to stand erect, without increased pain of the abdomen. The fomentation and poultice were continued, and the suppurated part was healed, excepting only a small orifice, with a very trivial discharge of matter.

On the 12th of August, on removing the poultice, a pointed substance in motion appeared in view. It was taken hold of between the fingers, carefully drawn through the orifice, and proved to be another *vermis lumbricus* in a living active state, in length about nine

inches ; small air bubbles occasionally appeared ; as well as some fæculent matter ; both ceased in a few days. For some weeks afterwards, no fæces were discharged through the wound, but seeds of apples or pears, which she had swallowed with these fruits, occasionally protruded. This ceased before the month of December, the orifice of the abscess had cicatrized, and an accretion of the body was perceptible.*

Admitting that my suspicions of a morbid state of the mesenteric glands were well-founded, restoration to health would not claim any particular notice here, as no merit could attach to such a favourable result, which is by no means unfrequent under judicious treatment ; but a cursory sketch of the general symptoms seemed to afford a proper introduction to this narrative.

Many instances have been related of worms perforating the intestines, and passing into the cavity of the abdomen ; these having generally terminated fatally ; to enumerate them would be tedious and unnecessary : see Morgagni, l. 34,

* During the last two years, since this history was communicated to the Medical Society, I have repeatedly seen the young woman, who has since enjoyed perfect health.

art. 36. Vanswieten, vol. iii. p. 416, and more fully in vol. iv. *Morbi Infantum*, and sect. 1366, p. 717, with their numerous authorities. Phil. Trans. vol. viii. p. 6060. Abridged, v. iii. Murray Opuscul. vol. ii. p. 7, &c.

In the Medical Essays and Observations, vol. i. xii. xix. Dr. Douglas describes the case of a tumor, which appeared a little above the groin, suppurated, and discharged about four ounces of pus: on the 23d subsequent, teretes passed through the abscess; and, ever afterwards, fæces were discharged through a small aperture of the cicatrix. A case not very dissimilar is related by Tulpius, l. 3, obs. 12: after the passage of a lumbricus, the part healed.

In this case, as well as in the present, of Elizabeth Gwillim, probably, by an adhesion of the external coat of the perforated intestine, with the peritonæal tunic of the abdomen; or, by some natural process of healing in the intestine itself, the comfort, if not the life, of this young woman, was preserved.

Dr. Chisholm, on the *Malis Dracunculus*, has made a digression respecting the influence of the lumbricus, in exciting fatal intus-susceptions of the intestinal canal. As this is a recent publication, I have only mentioned it as in

some degree connected with the present subject.

Mr. Norris, who attended the subject of this communication, informed me of a case that came under his immediate care, where a considerable tumor appeared above the groin; which, as the glandular part was not diseased, he suspected to arise from a congeries of worms; and, on which account he recommended an active cathartic, which was followed by a discharge of several *lumbrici*; which probably prevented a result similar to that described by Dr. Douglas, and which had previously occurred to Tulpius.

Lumbrici frequently pass by the rectum, as well as by the mouth, without any considerable degree of disease; and often in the progress of febrile and other diseases. For the complete expulsion of these worms, no practitioner would hesitate in giving cathartics as a prelude to subsequent treatment.

From the efficacy of *oleum terebinthinæ rectificatum* in expelling *tænia* and *ascarides*, I imagine that this active remedy would prove available in the expulsion of *lumbrici*; which, however, I have not hitherto tried. My friend, Dr. Walker, of Leeds, has favoured me with

the following practical observations, which are too interesting to require any apology for their insertion in this place.

Leeds, March 2, 1812.

The introduction of the practice of giving *oleum terebinthinæ* in worm cases, originated, I trust, with myself, in the year 1798. A bad case of *tænia* in our Infirmary, baffled all other medicines; and, to this patient I ordered the *oleum terebinthinæ* combined with a bitter, with a dose of *flores sulphuris*, once in four days. I thought it better to give a moderate dose, often repeated, rather than full ones, and I prescribed as follows; and, from the success have continued the same plan of treatment ever since that time, with complete success in every case, one only excepted.

℞ *Ol. terebinth. rectific.—Tinct. gentian. ã ʒj. capiat cochlearia. min. (tea-spoonfuls) ij. vel iij. Sva quaq. hora, ex haustu infusi fol. tanaceti.*

℞ *Flor. sulphur, ʒj sumat primo manè in sero lactis; et repet. quarto quoque die.*

J. WALKER.

From my own observation, I have reason to estimate highly this mode of treatment, parti-

cularly in cases where the state of the constitution will not, from debility, pregnancy, or other causes, safely admit of such a large dose, as an ounce or more of the oil, which is very generally recommended.

Many children and even adults have been long infested with worms, and, particularly with ascarides; with little other inconvenience than irritation or itching about the anus, or in the rectum, and the expulsion of which is not unfrequently difficult. From some experience of the beneficial effects of *oleum terebinth. rectific.* in the form of clyster, as well as taken by the mouth, I can state, that this practice may be adopted with safety and success; and particularly where ascarides tenaciously infest the rectum, and occasion painful irritation.

ART. VIII.

CASE OF DISEASED ACTION OF THE HEART,
EFFECTUALLY RELIEVED BY BLOOD-LET-
TING, AND CONFINEMENT TO A
HORIZONTAL POSTURE.

By H. CLUTTERBUCK, M.D. F.M.S.

Read, Feb. 13, 1815.

MRS. CHURCHER, thirty-five years of age, wife of a person in the employ of Messrs. Calverts, brewers, applied to me Oct. 20, 1814. She had just walked from her own house, a distance of about half a mile.

Her general appearance at this time was exceedingly distressing. Her countenance expressed great anxiety. The skin in general was perfectly pallid and ex-sanguine, except on the cheeks and lips which were of a leaden hue. The tongue was clean and moist, but as colourless nearly as the skin itself. Her extremities were cold—pulse weak and irregular—breathing much oppressed—the face looked full and bloated—the legs were swollen as high as the knees.

She complained of constant uneasiness in the region of the heart, which was affected

with frequent palpitations, sometimes coming on even when lying down in bed, but always upon walking, or any other bodily exertion; and, at these times, the pulse at the wrist becomes irregular. Upon making any unusual exertion, this uneasiness is aggravated to the degree of acute pain, which extends to the back, collar-bones, and middle of the upper arms, particularly the left. The menses, she observed, were regular in their periods, but trifling in quantity, and nearly colourless. She fancied she had hardly any blood in her veins; for she said that when she accidentally pricks her finger, so as to draw blood, the fluid that issues scarcely stains linen. Her appearance altogether was that of the most complete state of chlorosis, with not a few of the symptoms of *hydrothorax* or *hydrops pericardii*.

Her appetite was extremely bad: she felt always great uneasiness after eating; and the constricted state of her bowels required a constant employment of purgative medicines. Her general strength was greatly reduced; and this, with the growing severity of the symptoms, seemed to indicate much danger, of which she herself was very apprehensive.

The symptoms now described had continued

for several months, and were gradually increasing. They came on soon after a severe attack of inflammation in the chest, which she suffered about a year ago.

On visiting her the next morning, Oct. 21, at her own house, in consultation with Mr. Key, surgeon, of Fenchurch-street, we found the violence of the symptoms much abated, from her being in a state of rest, and in bed; and the pulse was tolerably regular.

The symptoms above described sufficiently indicated an excess of irritability and disordered action in the heart; while their duration, severity, and their having succeeded to an attack of inflammation in the chest, gave reason to apprehend, that the disposition to such irregular action in the heart, was the consequence of some disorganization having taken place.

The constant and, at times, severe pain the patient suffered, and the gradual increase of the disease, rendered it probable that the diseased and inflammatory action was still going on; and all hope of relief appeared to me to turn entirely upon our being able to check its further progress. No means seemed so likely to effect this desirable object as blood-letting. Notwithstanding, therefore, the debilitated,

and, seemingly, bloodless state of the patient, it was determined to make a cautious trial of it. Upon the pretext of examining the state of the blood, about five ounces were drawn from the arm, though not without much reluctance on the part of the patient; she bore it, however, without inconvenience. After the blood had coagulated, there was observed a full proportion of *crassamentum*, which was of the ordinary consistence, and somewhat cupped or contracted in form, but without any buff upon the surface of it. There appeared to be either a deficiency of the red particles, or else they wanted their usual florid colour, the *crassamentum* presenting almost a leaden hue.

The patient experienced evident relief from the loss of blood, and the road to further probable advantage seemed by this to be pointed out. The *digitalis* was administered in small and frequent doses, as a means of lessening the irritability of the heart; as was the *ammonia* in small quantities, with the view of exciting a little the action of the stomach, and of determining the circulation to the extreme parts. Aperients were exhibited, in such quantities as to ensure several evacuations by stool, daily—the use of plain, easily-digested animal food

was allowed, as the appetite might require—all strong drinks were prohibited, as they had always been found to aggravate her sufferings—and, above all things, perfect quiet of body and mind, and a horizontal posture, were enjoined; and, for this purpose she was confined to bed almost entirely for the space of ten weeks.

The blood-letting was repeated at intervals, and the plan altogether persisted in, with great regularity, for nearly three months, with gradual and continued amendment; and, at the end of this period, her health was perfectly restored. She had lost every uneasy feeling about the chest—the pulse became quite regular, and of its natural strength and fulness—the swelling of the extremities disappeared—her appetite returned, and the bowels acted readily with very little aid from medicine. The menses returned at their regular periods, and, the last time, in a perfect manner, both as to quantity and colour. Her complexion, also, was now as good as at any period of her life.

She was bled, in the whole, *four* times from the arm, and *once* by cupping, from the nape of the neck. From ten to twelve ounces of blood were taken away on each occasion after the

first. The time preferred for the purpose was immediately after each imperfect attempt at menstruation. Four or five evacuations by the bowels were procured daily, by small doses of aloetic pills, with which a very small quantity of sulphate of iron was combined.

I have not mentioned a troublesome beating which she felt in the head, at the time that the heart acted most irregularly; as this symptom appeared in a secondary light only, and it yielded with the other symptoms.

I have related this case, as it appears to me to establish some useful practical points. It serves to shew that symptoms of an alarming kind, seeming to indicate an organic affection of the heart, (or which, at least, threatened to terminate in disorganization,) are not altogether hopeless;—that a case which seemed of all others, from general appearances, and according to general opinion also, to be the most unfit for blood-letting, not only bore this evacuation with impunity, but evidently was effectually relieved by it. And, if so, it appears further to be probable, that the employment of remedies of an opposite nature, such as tonics and stimulants, which are generally had recourse to in such cases with a chlorotic character, and

with swelled extremities, would not only have proved unavailing, but, in all probability, have aggravated the disease.

I am disposed to attribute much of the advantage received in this case, to the strict confinement of the patient to the horizontal posture for such a length of time. I was induced to insist upon this, from knowing the effect which the erect posture of itself has in quickening the pulse under all circumstances; and, particularly from observing the great distress, the patient suffered, from every bodily exertion.

August, 1815. I am now, after the lapse of ten months, enabled to state, that the patient has continued to enjoy perfect health.

ART. IX.

CASE OF SUDDEN DIFFICULTY OF BREATHING,
THE CAUSE OF WHICH WAS NOT SATISFAC-
TORILY ASCERTAINED BY EXAMINA-
TION AFTER DEATH.

By J. C. LETTSOM, M.D.

ELIZA D——, twenty-two years of age, early in May, to avoid a storm, walked very briskly and hastily; in which exertion, she felt an uneasy sensation in the breast, conveying to her the feeling, as she expressed it, as if something had suddenly snapped. She was compelled to slacken her pace from the difficulty of breathing, which more or less affected her, till the time of my attendance, about three weeks after the incident alluded to.

At this time her breathing was laborious, quick, accompanied with such palpitation of the heart as was visible across the chamber, and with great oppression rather than pain, about the præcordia.

The number of the pulse amounted to 140, rarely under 130; it was feeble, and occasionally intermitting. She laid in bed with the head reclined on a low pillow, and with equal ease on both sides. Feverish heat was scarcely perceptible; languor considerable, and sometimes even syncope.

Under such symptoms of debility, venæsection was not recommended: a blister was applied upon the breast; and, the camphor julep with æther, and very small doses of digitalis were the principal remedies. In the commencement of the disease, the urine was turbid and small in quantity. Under a suspicion of effusion of water in the chest, digitalis was proposed as a diuretic, and, in the short space of two days afterwards, the urine was limpid and considerably increased in quantity. This was followed by a temporary mitigation of the symptoms; but, the extreme weakness, the palpitation, and rapidity of the pulse, resumed their former alarming state; whilst the facility of laying on either side, as well as low with the head, continued; and throughout the disease delirium never occurred.

Although many of the symptoms indicated hydrothorax, from the facility of lying in bed

in any position, I entertained a suspicion that some mechanical lesion or disorganization might be a prominent cause, which would be less liable to motion or to occasion general pressure than a fluid; an instance of which I once witnessed in a young lady with symptoms very similar, after whose decease, a glandular tumor considerably enlarged, was found between the ascending *aorta* and *aspera arteria*, which occasioned the fatal termination, without any extravasation of fluid into the thorax.

In the second week after my attendance Miss D. expired under increased debility and palpitation. The cavity of the chest was laid open by Mr. Norris; the lungs were in no part diseased, nor did the pleura appear otherwise than healthy: the left side of the thorax, however, contained about a pint of limpid fluid, without any morbid affection of the right side. In the pericardium was found about two ounces of similar fluid; without any appearance of inflammation or adhesion of the coats or vessels of any of these parts; nor did the heart and its appendages afford any morbid appearance, nor could any cause be discovered that might have produced this extravasation of fluid, which probably occasioned the death of the patient.

From all the circumstances of the case, it might be suggested that the violent and hasty exertion to avoid the storm, as noticed in the beginning of this narrative, had injured or ruptured some of the lymphatic vessels of the thorax and pericardium, and thus occasioned the accumulation of the fluid in those viscera, from defect of absorption. I do not, however, recollect any instance of hydrothorax to such an extent, in which there remained, throughout the disease, a constant facility of reclining the head and chest low in bed, and of lying on either side, indiscriminately, with perfect ease.

ART. X.

CASE OF STRANGULATED HERNIA CURED BY
THE ELATERIUM.

By JAMES WOODFORDE, M.D. C.M.S. Physician at Ansford,
Somersetshire.

GENTLEMEN,

The following, though a solitary case, contains the history and cure of such a dangerous and deplorable disease, that I trust you will with me deem it worthy of insertion in the memoirs of the society.

I am, gentlemen, yours, &c.

JAS. WOODFORDE, M.D.

Ansford, Nov. 4, 1805.

*“ Multa in præcipiti periculo rectè fieri possunt,
aliàs omittenda.”*

ON the 14th instant I was requested to pay a visit of humanity to John Barnard, aged about 30 years, a labourer; I found him alarmingly ill, and complaining as follows: of frequent and severe vomiting of almost every

thing taken into the stomach ; and, for the two or three last days, of the contents of the bowels. Both himself and his wife were convinced, from the smell, colour, and consistence of the matter thus rejected, that it was really *stercoraceous* or *faecal*. No stool, *per anum*, for thirteen days,—at which period the vomiting and constipation immediately supervened to a strangulated scrotal hernia, suddenly produced by muscular exertion. On examining the tumor, I found it completely extended to the scrotum ; it was large, much inflated, very tense, and extremely painful, especially upon the least pressure or motion. The integuments, however, were not much discoloured ; nor was the heat of the parts very great. The abdomen, particularly the inferior part, was equally tense and painful. His countenance was pale, sunk, and highly expressive of the torture of his sufferings, so long endured. He was very restless, and had had but little sleep since the commencement of the complaint. The pulse was 80—skin rather hot—tongue white, with thirst—high coloured and scanty urine. An experienced surgeon had attempted to replace the protruded parts by the taxis ; and recourse had also been made to various cathartics and clysters, but without

any success. The wife had been accidentally informed of the efficacy of a tobacco clyster, which was accordingly prepared after her own direction, by infusing, for a quarter of an hour, a half ounce of tobacco in a pint of boiling water. The whole quantity was administered; and, it surprised me to hear, that very little vomiting followed the administration of so large a dose of that powerful remedy.

The patient appearing as it were *in articulo mortis*, and recollecting the principle of the motto to my paper, I thought myself justified in trying a powerful, though, perhaps, a somewhat uncertain, medicine; and one whose exhibition in this disease I could not find sanctioned by any writer, either antient or modern. The remedy I mean is *elaterium*; which, from its strong, sudden, and almost certain operation, as a cathartic, I had intended to make trial of, in the next case of hernia that should occur; in the present instance, therefore, it appeared in every respect eligible. The success that followed has afforded me the most heartfelt satisfaction. The following are copies of the reports faithfully taken:

℞ *Elaterii* gr. ij. *opii. purific.* gr. i. *calomel.* gr. ii. *mucil. g. arab.* q. s. *m. f. massa in pilul.*

no. ij. dividenda, statim sumendas. Post horam, capiat ext. coloc. c. gr. v. singulis horis ad vices duodecies repetenda, nisi prius alvus profluxerit.

15th.—Severe vomiting, soon after taking the pills, followed within two hours by one stool; after which the vomiting abated, and has not been so frequent since the other stool, though he has taken one of the pills of *ext. colocynth. comp.* every hour, for twelve times. *Repetantur pilulæ ex elaterio ut supra. Continuantur postea pilulæ ex ext. colocynth. ut antea.*

16th, 10 A.M.—No effect as yet from the pills.

17th.—Two stools last night, very little vomiting, and much less pain; has taken some animal food this morning with some appetite,—though he has felt an oppression at the præcordia since. *℞ Pulv. cryst. tartar. ℥j. sulph. præcipit ℥ij. syr. spin. cervin q. s. ut fiat elect. cujus capiat molem nucis moschat. 2dis horis donec alvus responderit.*

18th, 8 A.M.—No effect from the electuary; symptoms nearly as yesterday.

℞ Elaterii gr. ii. ext. colocynth. c. pulv. jallap. à ʒj. ol. menth. pip. gutt. ij. m. f. massa, in pil. viii. dividenda. capiat ij. secunda quaque hora.

6 P.M.—All the pills taken—no stool ; several hours sleep during the day ; no vomiting.

℞ *Elaterii* gr. iij. *ext. colocynth. comp. pulv. jalap.* ʒ $\frac{1}{2}$. *ol. menth. pip. ess. gutt.* ij. *m. ut f. m. in pil. no xij. dividenda. cap. ij. 2da quaque hora.*

19th.—Three copious stools after taking ten of the pills. In the afternoon he felt a motion in the protruded parts, which by a little manual assistance afforded by himself were completely replaced, immediate ease followed, and ever since the functions of the alimentary canal have been regularly and duly performed. He is now, October the 24th, convalescent.

The above is certainly a striking instance of the sudden and powerful operation of elaterium as a cathartic ; and is, perhaps, sufficient to warrant a trial of it, in other the like cases of great and imminent danger from an obstruction in the bowels. Sydenham, Lister, and Heberden acknowledge the excellent virtues of elaterium as a hydragogue in dropsies ; to whose testimony I can, from repeated experience, add my own. In dropsy, in the dose of gr. i. or gr. ii. it acts quickly and powerfully as a cathartic, and generally, also, as an emetic ; with the effect of discharging a large quantity of

water. In this disease, Dr. Sydenham's common dose was gr. ij. in conjunction with ℥j. of the *pil. duobus*.* Lister generally gave from three to four grains with jallap, or other cathartics.† Dr. Heberden says, when the patient's habit is strong enough to support the operation of such an active remedy, he has been accustomed to give one or two grains in diluted spirit; and, if its operation succeed, and it be borne easily, he directs it to be repeated every fourth morning till the whole of the accumulated water be evacuated. On the intermediate days he recommends the exhibition of tonic and aromatic medicines. In this way he has known four or five patients with ascites cured, of whom one lived fourteen years free from the disease.‡ I have had sufficient experience of the propriety and success of this mode of treatment, in the cure of certain cases of dropsy; as, also, of that advised in many other diseases by the same illustrious writer,—whose works, like those of Sydenham, and others, founded on accurate observation and practical knowledge, will stand the test of ages.

* Sydenhami Opera Omnia, p. 494.

† Listeri Tractatus de Morbis Chronicis variis locis.

‡ Commentarii de Morb. Hist. et. Curatione.

ART. XI.

CASE OF APOPLEXY.

By JAMES WOODFORDE, M.D. C.M.S. Physician at Ansford,
in Somersetshire.

Read Monday, Oct. 12th, 1812.

To the Medical Society.

GENTLEMEN,

The communication of the following instance of apoplexy, with cursory remarks on the nature and treatment of that disease in general, will, I trust, be neither unacceptable to you for perusal, nor unworthy of insertion in the memoirs of your society.

“ *Non tantum ab effuso sanguine, sed etiam*
“ *a remorato et coacervato in cerebri vasis, esse*
“ *potest apoplexia. — Morgagni de Sedibus et*
“ *Causis Morborum, epist. iij. No. 25.*”

Mrs. B. aged 50, the subject of this history, is of a fleshy corpulent habit and of short stature, with a large head and short neck. She had previously suffered two slight attacks of hemiplegia, and had for several years been

subject to habitual vertigo, and to frequent head-ach and transient losses of the internal senses. She was seized suddenly in the month of June 1810, with a privation of the external and internal senses, of speech, of deglutition, and of the use of the left side. Respiration was short, difficult, and very stertorous. The urine and once the fæces were passed involuntarily.

The face was flushed and turgid; the skin was hot, and the pulse 100, strong and full. I was informed that she had passed a sedentary inactive life, and was accustomed to a generous diet; that, from being subject to head ache and vertigo, she had repeatedly had recourse to the application of leeches to the temples, and, also, to the taking of cathartics; but, in the use of which she had latterly relaxed. One of her parents died of apoplexy. An issue had been kept open in the neck for several years.

The above was the state of the symptoms the day after the attack.* Twelve ounces of blood were now taken from the right arm, and

* About 8 oz. of blood had been taken from the arm by a surgeon very soon after the fit.

on cooling it discovered a buffy coat. Twelve leeches were applied to the temples, and the bleeding from them encouraged by means of warm water; a blister was applied between the shoulders, and a stimulating enema injected. To these remedies were as speedily as possible superadded the auxiliary ones of *sina-pisms* to the feet, an elevated position, a cool room, &c. For the space of forty hours the violence of the disease scarcely remitted, and I had no expectation but that of a fatal event; but was prompted to persevere in exertions to recover my patient, by constantly bearing in mind the admirable precept of Celsus, "*satius est enim anceps remedium experiri quam nullum.*" After the lapse of thirty hours more, there appeared slight marks of returning sensibility, denoted by inarticulate sounds, both when spoken to and when not; by some but very imperfect power of swallowing a few tea-spoonsfuls of a liquid; by some motion of the left foot, and by a somewhat improved respiration. There still remained, however, a constant lethargy with redness and suffusion or turgescence of the face, and the pulse was 100 and full. Another general bleeding was instituted to the amount of ℥viiij. of blood, which was

also sisy. Nine leeches were applied to the temples, together with a laxative enema, and the application of cloths wetted with vinegar and water to the head, previously shaved. After this, a blister was applied to the occiput; deglutition being now, in some degree, restored, the saline mixture, with the tincture of digitalis, were given at stated periods, and also barley-water and gruel, with nitre. A gradual and more considerable amendment succeeded the third bleeding; for, by degrees, she occasionally spoke so as to be understood by the attendants; the urine continued to flow involuntarily, but not the fæces. In this state the symptoms continued a few days; but with frequent variations in respect to their degrees of force. Many exacerbations being perceptible in the space of a few hours; during which the face and head felt hot, and the former was flushed and turgid; the lethargy increased, the pulse became fuller, and the deglutition was impeded. During such accessions the cloths with vinegar and water were applied to the head; she was two or three times in a day taken out of bed, and kept an hour or two sitting upon a chair. Every part of the antiphlogistic regimen was strictly observed; every day

now brought some improvement and greater hope of recovery; though at the end of nearly a week, a threatening of a relapse appeared, discovered by pain and heaviness of head, drowsiness, and increased heat; when, for the fourth time, bleeding to $\bar{3}$ 8 was performed, and a large blister applied to the vertex. Further aid was also afforded by cathartics, and the tincture of digitalis in an infusion of roses, with a solution of the sulphate of magnesia. For a fortnight or three weeks after this time, notwithstanding there was a progressive improvement, yet occasional recurrences of affection of the head took place, and were constantly relieved by leeches to the temples, cathartics, and the tincture of digitalis. As the marks of increased action in the system diminished, she was put on the use first of the *infus. armorac. comp.* and afterwards of the *semen. sinapi. integr.* with the interposition of a cathartic as might appear necessary. In the beginning of this month I saw my patient so much recovered as to be able to walk short distances by means of a cane.

A short time before my visit, in consequence of some pain of head and vertigo, leeches were applied to the temples. A considerable quan-

tity of blood was lost, for the bleeding continued for many hours after the falling off of the leeches, and could be stopped only by the application of a styptic.

In this patient we perceive not only an hereditary disposition, but the strongest pre-disposition to apoplexy, arising from the continued agency of the structure of the body, inactivity, and full diet; and, what is more, from her having had before two attacks of paralysis. The symptoms, too, were those of a complete apoplexy, corresponding exactly with Dr. Cullen's definition.—“ *Motus voluntarii ferè omnes imminuti, cum sopore plus minus profundo, superstitute motu cordis et arteriarum.*”*

There can be no doubt about referring it to the first species, the *apoplexia sanguinea cum signis plethoræ universalis et præcipue capitis.*”

The disease of apoplexy is so frequent, and so universally fraught with danger, that every attempt to ascertain the most prompt measures for affording relief must be of the greatest consequence. Hence we may strictly apply the epithet, “ *Mors cita aut victoria læta.*”

Persons most liable to apoplexy are those of

* Nosol. Method. tom. ii.

a large stature, of corpulent and plethoric habits, addicted to a sedentary life, and to intemperance in eating, drinking, and venery, and whose age ranges from 50 to 80 years. In the treatment of apoplexy, till within these fifty years, especially in England, recourse was had to early, copious, and repeated, detraction of blood, both generally and locally; but, since the period mentioned, doubts have arisen concerning the propriety of bleeding; at least, of the general adoption of the practice, and of its being carried to any great extent. In consequence of such an opinion, and in deference to the learned authorities* by whom, I believe, the practice of bleeding was first called in question, it has happened that practitioners are become extremely sceptical in the utility of the operation.

I am sensible that in the cure of any disease many exceptions will arise to the adopting of a general method of treatment; but, it must certainly be of importance to appreciate which of two general rules is the best. The difficulty, therefore, is, whether bleeding should be used generally in apoplexy, as recommended by the

* Doctors Fothergill and Heberden.

antients; or only partially and sparingly, as advised by several moderns. The case now detailed is one that strikingly illustrates the great efficacy of repeated venæsection; and, I have a recollection of several more in which a similar plan of treatment was successful.

I have been chiefly influenced in my line of practice in this disease by the sentiments of Valsalva and Morgagni; and, when we consider the number and accuracy of their details of cases and dissections, as well as their undoubted authority, I think we cannot place confidence in better guides. If the dissections of these celebrated anatomists be consulted, as contained in the second and third epistles of the incomparable work *de Sedibus, &c.* it will appear that apoplexy consists generally in an increased action and distension of the vessels of the brain; and, that the only probable mode of relief is by venæsection, cupping, blistering, &c.

JAMES WOODFORDE, M.D.

Ansford, Sept. 12th, 1812.

P.S. The above patient is now living, and has had several threatenings of an attack of apoplexy averted, by early, general, and topical, bleeding.

ART. XII.

OBSERVATIONS ON SOME ILL EFFECTS ARISING
FROM MOISTURE IN HOUSES.

By J. C. LETTSOM, M. and LL.D.

PERHAPS there never was a period that demanded more impressive caution against the early inhabiting of newly-built houses than the present. Many buildings, whose foundations were laid in summer, have been hastily run up and inhabited in the same year; and common observation must convince every person, that moisture is continually exuding from fresh mortar and plaster. In many of these cases I have observed the moisture forming like dew-drops, uniting and trickling down the walls of the different apartments.

It cannot but occur to the medical observer, that rheumatisms, colds—terminating in cough,

and consumption, and other serious disorders, must frequently result from this source.

It has often been an object of surprise to me that so little attention is paid to the choice of habitations. Many circumjacent places, where houses are erected, are below the tide of the River Thames, and too low in their situations to allow of drains; and frequently, to avoid expense, they are not furnished with cellars: hence, the ground floor, the usual residence of the family, is moist, from evaporation, even after the walls may have become hard and dry.

In these situations, the most frequent diseases are acute and chronic rheumatism and spasmodic affections of the muscles of respiration.

I have now, under my care, one of these unhappy cases, where the patient has been such a cripple for two years as to be incapable of even walking over her chamber, without supporting herself from the back of one chair to that of another.

When moisture from these sources is applied in a more general and diffusive manner, the diseases are more rapid and dangerous. There ensues such a powerful disorganization of

muscular and nervous energy as destroys vital action, and terminates existence; as I have had occasion to witness in two recent instances. The first was of a patient who had been employed to take the care of a large newly-built house; wherein, to use his own words, "he wiped the water off the wall by handfuls." He, indeed, did not sleep in the house, but passed the days in endeavouring to dry the apartments, and prepare them for early residence. In September, 1812, he experienced a general stiffness and sense of soreness, as if he had merely taken a sudden and severe cold; but the chief affection was felt in the lower extremities. By degrees, their rigidity and debility prevented him from standing on them, and, gradually, of even moving his legs, under the severe spasms which now supervened, and by which they were forcibly contracted and drawn up towards the body. At any time, the most gentle pressure, or slightly touching them, excited very painful sensations. In October, the symptom had so greatly increased as to render him incapable of rising from his bed, in consequence of this rigidity of the muscles and inability of action extending along the whole course of the spine to the

first vertebra of the neck; it was hence impossible to bend the body, and consequently to move him from the bed; which was rendered still more impracticable by the painful spasms which ensued from the slightest attempt at motion. The spasms gradually extended to the muscles of the face, exhibiting a similitude to *risus sardonicus* on endeavouring to speak; and occasioning, at the same time, considerable difficulty of articulation, although the mental powers were never altered or injured. At length, the spasms extended over the whole trunk, and threw it into a state of opisthotonos, with impeded respiration. The legs now were more plastic, and less agitated by spasm; the arms became enervated, and totally paralytic; and the muscles of inspiration acquiring a similar state, and nervous energy subsiding, the patient ceased longer to breathe.

Early in the attack of the disease, before the general rigidity of the body precluded motion, the warm bath had been repeatedly tried; at first, with some prospect of benefit, but the advantage was transient. To counteract the spasmodic affections, volatile medicines, blisters, sinapisms, fomentations, and embro-

cations, were in vain recommended;—opiates proved equally ineffectual. It would seem as if the first potent onset of the debilitating effects of cold and moisture, on the nervous energy, had disorganized its power and suspended its action, and induced such a state of complete atony and collapse, as to baffle every effort to revigorate energy, and every stimulus to animate vital power.

On the 21st of September, 1813, I was requested to visit J. Mousely, aged forty, whom I found in a state of disease, in many respects resembling that of the former, and resembling it still more minutely in the cause and origin. There was not any cellaring under the room in which the patient lived and slept. It was situated in a low part of Bethnal-Green; a drain, which had little or no fall to carry off the rain and its other contents, was contiguous to the thin and decayed wall of the apartment; and hence the floor, as well as the walls of the room, were always damp.

I learnt that he had been confined to his bed about eight days, from incapacity, in consequence, as was related, of losing the use of his legs. I examined them, and found them as immoveable as if they had really been of

wood. The influence of cold and moisture had induced torpor and insensibility. A degree of paralytic weakness, commencing at the lower extremities, had gradually crept upwards and subverted the power of muscular action; differing from the former case, in destroying irritability and nervous action: neither was he agitated by spasmodic motions. The torpor extending upwards had suspended the due action of the intestines, and induced constipation. Dyspnoea, from the disorganized power of the organs of respiration, was augmented; the pulse became weak and irregular, from the same cause, weakening the energy of the nerves and muscles requisite to the motions of the heart. From previous experience I did not hesitate to apprise the friends of the mortal prospect, which pungent cataplasms to the feet, blistering the chest, and stimulating the intestines to action, did not prevent from being realised in little more than seventy-two hours after my visit.

This fatal case had scarcely passed under my review, when I had occasion to attend a child, under three years of age, James Bruce, of Little Britain, whom I first saw on the

19th of October. The infant sufferer had been entrusted to the care of a thoughtless nurse, who had left it, for a considerable time, on the moist earth, out of doors, with little or no garment intervening between it and the cold ground. This was, at least, a month prior to my attendance.

The effect of this unguarded exposure was first noticed in the weakness of the legs; these the child had previously used with agility. They now became torpid, without pain, and with very little power of moving them. By proper warmth, moderate friction, and exercise, aided by tonic remedies, such a degree of action was restored as enabled the child, with the aid of a hand to each of his, to waddle over the floor, with considerable difficulty, in consequence of one leg being weaker than the other, though of equal magnitude and plumpness. The health, as well as the action of the lower extremities, however, gradually improved. The nervous power gradually acquired its natural energy, and the prospect of a paralysis of the legs was thus happily prevented.

If I have not conveyed any thing of novelty in these cursory sketches, they may afford

some utility, in preventing certain domestic diseases, if so they may be designated, and such salutary cautions as are within the compass of every man's reflection.

Of the effect of intense cold in destroying the vital principle no person can doubt, from the frequency of its occurrence.

ART. XIII.

OBSERVATIONS ON THE USE OF THE BARK OF
SWIETENIA FEBRIFUGA.

By WILLIAM ROXBURGH, M.D.

Read December 8, 1806.

IT is now about fifteen years since the first part of this paper was written.* At that time, I had little more than conjecture to offer respecting the virtues of this bark. Since then it has been successfully used as a febrifuge in various parts of the world, I shall, therefore, state a few of the most striking proofs of its utility that have come to my knowledge during that period, and only insert

* The author alludes here to a work entitled,—“ Botanical
“ Description of a New Species of Swietenia (Mahogany,)
“ with Experiments and Observations on the Bark thereof,
“ in order to determine and compare its Powers with those
“ of the Peruvian Bark; for which it is proposed as a
“ substitute. Addressed to the Hon. Court of Directors of
“ the United East-India Company.”

one case from my own practice ; viz. the first in which I ventured to use it, not because the case had any thing uncommon in it, but because it was the first ; and with the view of removing any idea of rashness on my side, for having ventured to be the first to administer a new medicine, for I had not been able to learn that it ever had been used internally, by the natives or any other.

May 30, 1791. A young man, aged twenty, a native Hindu labourer, and one of my itinerant botanists, of a thin, delicate constitution, had been employed, some months ago, amongst the skirts of the mountains, where he caught the usual remitting fever, which, till this time, he has laboured under. It generally remits for some hours during the day ; and, as Peruvian bark had been tried for some time, without any benefit, he was as desirous as myself to exchange it for that of the Swietenia ; for I ventured to take small quantities of it myself, at various times, since I had an idea of its possessing virtues similar to those of Peruvian bark, which I first discovered by tasting it, when writing the description of the tree ; a practice I constantly follow with the leaves, bark, and fruit, of all the plants I

describe. I cannot learn that the Hindoos of these parts have ever used it for any purpose whatever, until within these two years that I have taught them the use of it in the cure of intermitting and remitting fevers. I was, therefore, under no apprehension of any bad effect from it. I began, during the remission of the fever, with a dose of 20 grains of the powder in cold water; which, perfectly agreeing with him, in two hours, I doubled the quantity, which also agreed well with him. In two hours more, I gave him 60 grains, which also agreed equally well; nor could the patient or myself observe any immediate effects from it, except that of proving somewhat purgative.

31st. The fever came on rather earlier than usual last night, but did not continue so long by some hours; the patient also said, it was less severe. These favourable appearances encouraged me to repeat the bark: this day he took, during the forenoon, three doses, each one dram.

June 1st. He had but a slight return of his fever during the night: to-day I gave him three doses more, in the same quantity.

2d. Last night, scarcely any return of the fever: continues the bark.

3d. Had no fever last night, yet I ordered him to continue the medicine twice a day for some time longer.

August 10th. He has continued free from the disease ever since it left him the beginning of June.

Remarks.—The mountains here referred to, form a part of a detached wing of that immense chain, commonly called — Balagaut, which extends from Cape Cormorim, north, through the Peninsula. The detached chain, or wing, runs along the back part of the northern provinces, commonly called—Northern Circars, separating them from the Berar Rajah's dominions; the whole of it is covered with the most luxuriant, impenetrable forests; the habitation of tigers and other wild beasts. To man they are remarkably unhealthy, even to the few natives themselves who have been born and live there; but much more so to strangers. The disease approaches nearest to a remitting fever of the worst kind, with the interposition only of a slight remission once in twenty-four hours. Few, very few, indeed, who are under the necessity of going in amongst those mountains, escape having this fever, particularly between the months of

October and February,—and still more so, if the season has been uncommonly rainy; and, I may safely add, that not more than half of those who are seized with it in any of those months, during such a season, recover. So far as I have been able to discover, there are no very extensive lakes amongst those mountains, but many humid valleys, covered with one continued forest.

(In various other instances of intermittent or remittent fever, as also in gangrenous and other ulcers, Dr. Roxburgh says, he found it equally beneficial.)

The above-mentioned patient caught his fever during the dry season,—it was, therefore, one of the least violent I have met with, though not the less dangerous, from its long continuance and obstinacy.

It is also necessary to observe, that, during the years 1791 and 2, our intermitting fevers were few and mild, owing, I presume, to the great drought that prevailed, which may have added to the success attending the use of this substance. It may also be observed, that I did not always attend to the usual custom of vomiting and purging the patients, previous to the exhibition of the bark; a practice, less

necessary with the natives of India, whose constitutions have little of the inflammatory diathesis, so prevalent amongst Europeans. The nature of their food, religious prejudices, and the climate in which they live, corroborate this observation. For my own part, I believe that both intermittents and remittents are often protracted by needless delays, and the patient exhausted, not only by the disease, but by the evacuations given to *prepare* for the bark.

I have generally given the powdered bark in substance, mixed with cold water; the dose, from 20 to 60 grains; about 60 has been the most usual quantity.* The first day it usually proves considerably laxative, but less

* Since writing the above, one case has occurred which required an uncommonly large quantity of the bark before it yielded. A young gentleman was attacked with a most obstinate remitting fever, which he got in Bengal during the rainy season: for three weeks it had resisted the effects of Peruvian bark: in this case, an ounce of the powder in substance was given during the intermission, (which was at first very imperfect, irregular as to recurrence, and lasted only a few hours,) before the disease took a favourable turn. I mention this case, because it required more than double the quantity of the bark that I had ever before found necessary in the hill fever, or common intermitting fevers of this part of the coast.

so afterwards; nor could I observe any other sensible mode of operation, except the entire removal of the disease and an improved appetite. Little or no nausea, nor any kind of uneasiness, attended its use; however, it is to be considered, that, with the natives, (living at some distance from me, at their own houses, and seeing them only once or twice a day, and sometimes not so often,) absolute dependence is not to be placed in their reports; it is, therefore, likely that others, with a more extensive practice, may be able to discover effects from this bark that have not yet come to my knowledge.

In some gangrenous and other bad ulcers, I have continued it for five or six weeks, two, three, and four, times a day, without observing, that it ever tended to bring on abdominal obstructions of any kind. The belly was in general regular, or rather open, and the skin and urine remained clear, or became more so during the course; the appetite was also improved. These brief remarks are intended to induce others to observe what effect a course of this bark may have in removing, or causing, obstructions in the liver, or in any of the other viscera; for, I believe it has generally

been observed, that a long continued course of Peruvian bark is frequently apt to bring on obstructions, and to increase those already formed.

In one case, a dangerous remitting fever, caught in Bengal, which had resisted the use of Peruvian bark; — there were evident obstructions in the liver; but, as the danger from a continuance of the fever appeared to me to be by far the greatest, I hesitated not to administer the bark in large doses, during the remission, and found, at the end of eight days, (from the time he began the bark,) when the fever was nearly removed, that the obstructions were less evident; the bark was then joined with calomel, which soon completed the cure.

It is by no means uncommon amongst the natives of India for their intermittents and remittents, particularly those called hill fevers, when not violent, to continue long, and end in dangerous chronic obstructions of the spleen, (Aguecake*) a disease which I have

* Catly is the name it is known by amongst the native Portuguese, and called Billy, or Pilly, by the Hindoos and Bengalese, in and about Calcutta, where numbers of the

very frequently met with in India, but I have never found such a termination amongst those who have been cured by the Swietenia.

The following extract further points out the value of this bark as a remedy for the hill fever of the Circars, (already taken notice of,) which is the most dangerous disease we are liable to in these parts.

Extract of a Letter from Lieut. Armstrong to Dr. Roxburgh ; dated, Rajahmundy, April 19, 1792.

“ I will thank you for some more of your
“ new bark, as I have expended all you gave
“ me with very good effect, curing every one
“ to whom I gave it, in three or four days.”

“ *Note.* — Lieut. Armstrong has been on
“ command upon the skirts of the Gootalah
“ hills, part of the fore-mentioned range of
“ unhealthy mountains, where bad intermitting
“ and remitting fevers prevail.”

“ *To Dr. Roxburgh.*”

poor natives die annually of this disease. And, although mercury may almost be reckoned a specific in the cases of this dangerous disease, when taken early, yet few of them can be prevailed on to use it.

Mr. Folds, Surgeon to the Honourable Commodore (now Admiral) Cornwallis's Ship, writes to the following effect :—

“ Samulcottah.

“ Sir,

“ In compliance to your's, of the 27th inst.
 “ to Mr. Robson, I take this opportunity to
 “ inform you, that I administered the bark
 “ *you were so obliging as to send me*, in decoction,
 “ four times each day, for whom I
 “ thought it necessary, and in each dose I
 “ gave one dram. It certainly had so far an
 “ effect as to stop a return of the intermittent
 “ fever in twenty-five of the men, at the hospital,
 “ out of thirty, and in three out of five in
 “ the continued fever, when I administered it
 “ to them. My son was one of the last mentioned,
 “ and the fever continued on him nine
 “ days before I was able to give it to him ;
 “ he is now recovering, and continues to take
 “ it three times each day. I administered the
 “ Peruvian bark to most of the men for several
 “ days in like quantity, as I did *your bark*,
 “ after I had vomited and purged them, but
 “ must confess not with the same success, as

“ several had a return of their fever. I must
“ observe, from information, I expected your
“ bark would have purged to whom I ad-
“ ministered it, but that was not the case in
“ general, as I was obliged to give the Sal.
“ Cathar. A. every third or fourth day while
“ I made use of your bark. For further
“ information I shall inform you from Madras
“ of its future success and effects. I have
“ further to say, all the sick in the hospital
“ are returned on board his majesty’s ship
“ *Minerva*, without the loss of one man.*

“ I am, your’s, &c.

(Signed) “ **THOS. THYME FOLDS.**

“ *Cockanada, August 30, 1792.*”

The Hospital-Board of Fort St. George sent a parcel of this bark to each of the four general hospitals under that Presidency, with orders for its being tried, and to report its effects; the only report that had been made, when I was in Madras, in February last, was

* It may be proper to observe, that the Commodore’s ship had just come from Bengal, where the worst kind of remittents are frequent at that season.

by Mr. Mein, the Head-Surgeon at Trichinopoly, of which the following is a copy:—

*To Valentine Conolly, Esq. Secretary to the
Hospital-Board.*

“ Sir,

“ Please to acquaint the Hospital-Board,
“ that, since I had the honour to receive your
“ letter of the 5th of March last, relative to
“ the Cortex Swietenia of Dr. Roxburgh, that
“ I have had several cases of intermitting
“ fever in the general hospital, No. 6, in which
“ it proved a successful cure, when the Cor-
“ tex Peruviana had been tried and failed. In
“ the cases above-mentioned, it was given in
“ substance to the amount of two scruples,
“ six times a day. In the case of amputation
“ for mortification in the carpus, which I
“ formerly mentioned, it was freely given, and
“ the stump for a fortnight put on a favourable
“ and healing appearance; but, after that
“ time, it again became gangrenous, and the
“ patient was seized with a rapid hectic fever,
“ which terminated in death in a few days.
“ This man suffered long from confirmed lues,
“ which had tainted the whole system, and

“ must have greatly added to the gangrenous
“ tendency of the stump.

“ This account of the efficacy of the Cortex
“ Swietenia having been immediately under
“ my own observation in the cure of intermit-
“ ting fevers, corroborates Dr. Roxburgh’s
“ observations, and, I hope, will prove satis-
“ factory to the physician-general and members
“ of the Hospital-Board.

“ I have the honour to be,

“ SIR,

“ Your most obedient servant,

(Signed) “ NICOL MEIN,

“ Head Surgeon.

“ *Trichinopoly, June 4, 1793.*”

To Dr. Roxburgh.

“ Dear Sir,

“ Long ere this I intended writing to you,
“ respecting your bark, which I have found,
“ from repeated trials, to be very efficacious
“ in the cure of fevers. I had the pleasure,
“ when our detachment passed Samulcottah,
“ in November, 1792, to receive a large quan-
“ tity of the bark ; and, during the last year,

“ I used nothing else among the Sepoys, in
 “ a great variety of cases. I succeeded in
 “ every one. It was now about nine months
 “ since I used the last of it; and, from some
 “ conversation that I had with Dr. A. Frier,
 “ respecting the Toon tree,* I was induced to
 “ commence some experiments with its bark.
 “ I have found it answer equally well with
 “ your’s, and, from the infusions of both
 “ turning purple, with the solution of *sal*
 “ *martis*, I am inclined to think them one and
 “ the same bark. I, however, have the plea-
 “ sure of enclosing you some of the Toon
 “ bark in powder, with a little of the extract,
 “ and you will confer a great obligation on me
 “ by comparing them with your’s, and letting
 “ me know the result. The extract and the
 “ Kutkullegie, joined with a little of aromatic
 “ powder, I have found sets well on the
 “ stomach, and I think the best mode of using
 “ it; the Coringa, or Kutkullegie,† is an

* The Toon tree is a new species of the Genus *Cedrela*, which is very nearly allied to *Swietenia* in its natural character and general habit, and has been already taken notice of.

† The seed of *Guilendina bonduccella*.

“ agreeable bitter, and may, no doubt, assist
“ in giving tone to the stomach.

“ I am, &c.

(Signed) “ J. KENNEDY.

“ *Burragong, Oct. 1, 1794.*”

*To John Laird, Esq. President, and Members
of the Hospital-Board, Calcutta.*

“ Gentlemen,

“ On the subject of the Swietenia, it is
“ with great pleasure I acquaint you, that, in
“ the few cases of intermittents, where I had
“ an opportunity of administering it, which
“ were quotidians and tertians, it seemed to
“ be as effectual as the Peruvian bark, and,
“ I hope, may prove an useful substitute for
“ it.

“ Its good effects were not so distinguish-
“ able in large purulent discharges, or old
“ ulcers ; but the quantity which I had did not,
“ perhaps, admit of a fair trial in these cases.

“ I have, &c.

(Signed) “ W. ROSS MUNRO,

“ Head Surgeon.

“ *Dinapore, Oct. 7, 1794.*”

To William Hamilton, Esq.

“ Dear Sir,

“ After reducing the bark of the Swietenia
“ Saymida (febrifuga), which you did me the
“ favour to send me, to a fine powder, I pre-
“ scribed it in doses of a tea-spoonful, every
“ hour in the intermitting fever. In every case
“ in which it was prescribed it proved success-
“ ful. One of my patients was a member
“ of my own family, who assured me, it was
“ less disagreeable to her taste, and lay more
“ easily upon her stomach than the common
“ bark. I beg you would communicate this
“ information to Dr. Roxburgh, and assure
“ him, at the same time, of my great respect
“ for his zeal in promoting the science of
“ medicine.

“ With great regard,

“ I am, dear sir,

“ Your most obliged friend

“ and most obedient servant,

(Signed) “ BENJAMIN RUSH.

“ *Philadelphia, Dec. 14, 1801.*”

Some part of this bark found its way to Batavia soon after the discovery was made.

The success that attended its exhibition in the cure of the fevers of that place was the cause of a public application from thence for one thousand pounds weight of it, which was sent before the late war begun.

The French found it equally beneficial at Mauritius, and made a similar application, but before it could be sent the war commenced, which prevented a compliance with their request.

ART. XIV.

CASE OF HYDROPHOBIA.

By ——— WHITE, Esq. Assistant-Surgeon to the Westminster Infirmary
and Surgeon to the Asylum.

Communicated by Dr. WALSHMAN.

Read, September 25, 1815.

I WAS desired to see John Doyle, aged nineteen, at Kennington, early in the morning of the 28th of June last. The detail of the case is as follows:—Six weeks and three days previous to my seeing him, about ten o'clock in the evening, he met an acquaintance in the street near to the place where he lived, and, perceiving him to be drunk, he offered to conduct him home. This friend had with him a mongrel bitch, which was, at that period, in heat, and which had been with him all the evening at the public-house. On their arrival at the dwelling-house of this man he requested Doyle to take the key out of his coat-pocket and open the door; when, in the act of doing this,

the bitch leaped up and bit his hand in three or four places, and, on his striking her, she bit the other hand also. The wounds, seven or eight in number, bled copiously ; he returned home and washed the wounds, put some ointment on them, and went to bed. In the morning, he called on this man to shew him the wounds inflicted by his dog, when, on entering the house, the bitch again seized him by the leg and (as he expressed it) pinned him for a considerable time. With the permission of her master, he immediately killed the bitch. Having thick trowsers on, the teeth of the dog did not penetrate through to the skin : the animal was killed on the score of revenge, and not under the apprehension of its being hydrophobic, no symptoms having been observed by any one. From the circumstance of the animal being in heat, she had been followed, for some days, by a great many dogs. Six weeks and three days, then, from this period, passed away, and he remained in good health ; the wounds on the hands had healed in a few days, and the circumstance was forgotten. On Monday evening, the 20th of June, he complained to his mother that his fingers and hand, in several places, were painful to the

touch ; and, on looking at them, the painful places were the precise points on which he had been bitten. On Tuesday, a considerable pain extended up the left arm, and he felt drowsy and unwell all day, and took no food. On Tuesday night, at ten o'clock, he went to bed ; his mother gave him some spirit and water, which he drank without hesitation, still complaining of feeling ill, with a considerable pain in the left side of the neck, and in the direction of the left pectoral muscle. On offering him a second time the spirit and water, he took the cup in his hand, but, on raising it to his mouth, felt a dislike and inability to drink it. The whole of Tuesday night he passed without sleep, and, on Wednesday morning, at six o'clock, Mr. Pratt, of Kennington, was desired to see him. On Mr. Pratt questioning him as to the cause of his illness and want of sleep, he attributed it entirely to the pain he felt in the upper part of the left arm, neck, and chest, and mentioned the circumstance of his fingers being first painful where he had been bitten six weeks before. I may here observe, that neither himself nor his parents, up to this moment, had the slightest suspicion of the cause of his illness. Mr.

Pratt suspecting the cause, requested him to drink some water, which, when he attempted, he found himself unable to accomplish; saying, "he was afraid it would strangle him," accompanying his observation with a deep sob and expression of dread. He was bled to $\frac{3}{4}$ x. At eight o'clock I visited him, with Mr. Pratt; previously, however, to our calling on him, being fully convinced of the reality of the disease, from Mr. Pratt's well-defined account of the previous history and present symptoms, I suggested the mode of treatment which I was desirous of steadily pursuing throughout the day. Next to the peculiar symptom of the dread of deglutition in hydrophobia is an unaccountable alarm produced by a variety of causes, such as the opening of a door, speaking loud, quick movement in the chamber, the appearance of strangers, a noise of every kind, with many others, the patient always expressing his perturbation by a deep drawn sob, accompanied with an expression of eager anxiety. I suggested to Mr. Pratt the necessity of obviating, as much as possible, the excitement of this symptom, and this could only be accomplished by rigidly refusing admittance to every stranger to the

house and to his chamber, from which, also, I wished the light to be nearly excluded. In three cases of this disease, which I have seen, much increased misery has been evidently accumulated to the patient from the admission of strangers. The disease, fortunately, is of rare occurrence, and when it is generally known, the curiosity to see it, among medical men, is such, that the patient has rarely a few moments of undisturbed tranquillity.

Hitherto, an antidote to this distressing disease has not been discovered; the rapidity with which it runs through its course affords but a very short opportunity for administering medicine with any decidedly good effect, every well marked case having quickly proved fatal. In all cases of hydrophobia the quick succession of overwhelming alarm, excited by the most trivial causes, most decidedly and rapidly wear out the irritability of the patient; and when he no longer is susceptible of external stimuli, a general collapse of the whole animal powers succeeds, and the wearied machine happily becomes quiescent in death. Considering, then, from the common symptoms of this strangely-morbid and intense state of mental excitement, from external impressions, that the most ra-

tional prospect of success in our treatment would be to shut out every chance of the disease being influenced by any of the already enumerated causes, I proposed to Mr. Pratt that we should endeavour to render him comatose, with the possible prospect of retarding, at least, the hasty-footed journey to death. In this Mr. Pratt acquiesced with me, and I requested him to take to the house of the patient, a bottle of Tr. Opii. and also a bottle of Tr. Digital. as it was my intention, with those medicines combined, to attempt our projected plans. The first effect of opium generally produces a short and temporary increase of the pulse, and it acts as a stimulant; its sedative properties, affecting the sensorial powers, and, consequently, the animal functions, then succeed. The properties of the digitalis appear to have a more immediate reference to the controlling of the action of the heart; and it was from considering the specific influence which those medicines have on these two important organs, the brain and heart, that I selected them with the determination of persevering in their use steadily through the day, if circumstances permitted me. On entering the dwelling of this patient

we found him standing with his arms folded and resting against a table. He was of good person and fair complexion. He had been brought up to the sea service, and his last voyage was to India. His appearance had nothing remarkable about it, which in the slightest degree could give a suspicion of his being under the influence of any morbid affection; he merely appeared a little abashed on the appearance of a stranger. I soon discovered from his manner, that he suspected his illness to proceed from the bites of the dog. A woman living two houses distant, in the same street, had, about thirteen months before, a boy bitten, and who died of hydrophobia, and from her report and observation, as to the similarity of the symptoms in this case with her own son's, he appeared, though not expressing it, fully persuaded he was attacked with the disease. My first object was to gain his confidence, that I might ascertain, by his own description, the real state of his feelings, and, after half-an-hour's familiar conversation with him, as to the history of his life, and expressing my anxious wish to be of service to him when he recovered, he soon began to lose his reserve and freely answered all my questions.

I persuaded him, that his feelings were those of apprehension and not of real disease, and that if he had resolution to drink off a cup of water the charm would be broken and the apprehension at an end. I accordingly poured out water into a cup; he eyed the act with looks of timid anxiety, and once sighed deeply. I placed the cup within his reach on a table, requesting him, at the same time, not to hurry himself, but deliberately to consider what he was about, and first of all to take hold of the cup as it stood, and to remain at that point a short time before he raised it to his mouth. I was well aware, from the observations I had made in other cases, that unless the act of swallowing could be done with great steadiness and with self-possession, it would be entirely frustrated, and the alarm produced prevents the chance of a repetition for a considerable time. The hand was often stretched towards the cup and as often withdrawn. I now inquired what was the real state of his feelings, and what the cause of his irresolution. “Are you afraid of the water?” “No; not further than the dread of swallowing it.”—“What do you apprehend from swallowing it?”—“I hardly know—but I do not think I can—I think

“ I shall die.” “ Then you are not afraid of
“ the sight or noise of water?” “ Oh no; if
“ I did not think you wished me to swallow
“ it.” I poured more water out of a jug before
him whilst I asked those latter questions, and
he was not, apparently, affected by the sight or
by the noise. After many efforts and after much
encouragement the cup was grasped, and the
act accompanied by a deep drawn inspiration.
“ Now we have gained this point, I must en-
“ treat you not to quit it until you have ac-
“ quired resolution to carry it steadily to your
“ mouth, and when it is brought there again
“ to pause before you attempt to swallow it.”
The cup was often ineffectually raised, and
put down; at last, with the head averted, he
brought it to his side, and gradually stole it up
over the shoulder to the chin. “ Now, sir,”
said I, “ you must stop; I will not permit
“ your hurrying.” A rapid breathing accom-
panied this last attempt. Still encouraging
him, I requested that when he found himself
able to make the attempt, he would do it slow-
ly and at distinct draughts. The cup was
held a few minutes in the last named position,
and, as I observed him on the point of over-
coming his dread, I cautioned him, “ recol-

“lect, do it slowly.” The effort appeared monstrous, but he succeeded; hastily pushing the cup into my hand, he exclaimed—“There now!” accompanied with repeated sobs, similar to those produced when a person has, unexpectedly, had cold water dashed upon the naked body. “Now you are glad that you have conquered the dislike and fear of swallowing?” “Oh, yes, I am very glad I have done it.”—And his countenance expressed his satisfaction. “Can you describe what your sensations were when in the act of swallowing?” “I felt it here,” putting his hand to his throat and about the præcordia. “What sort of feeling;—was it painful?”—“No; I felt as if I was going to die.” An eructation, the consequence of having taken the water, produced much suffocating distress, and which happened three or four times; he appeared to dread it as much as swallowing the fluid. After a few minutes, I said to him—“You have overcome the difficulty, and you have said you are not afraid of the sight of the water; you have no objection to put your hand in it?” I poured out some into a bowl, he put one hand in, and then the other, with slight sobbing. He, at my request,

splashed it about for some time, until I observed he had lost all apprehension of it and he was gratified in doing it. I then requested him (at the same time assuring him of my belief of his doing well if he could overcome it) to put his face into the bowl of water, and at the same time, with his hands, to wash his neck and face. This he most courageously began, laving the water in the hollow of his hands and splashing it over his face and neck, overhanging the bowl. The effort used and the courage accompanying it, were very great. The singultus and horror were in the extreme.

The existence of the disease could not now be doubted; and I proposed that he should take *tinct. opii. gtt. 100, and tinct. digitalis gtt. 50.* The pulse was at 78; the skin cool, and tongue rather white; the medicine with about $\frac{3}{4}$ of water, was taken with as much fear and difficulty as the water alone had been, but every drop was swallowed. I before have mentioned that Mr. Pratt had bled him; it was now repeated. On tying up the arm with the view of drawing blood from the puncture previously made, a drop or two sprung upon his face; this alarmed him much, and he was excessively anxious to have it wiped off; the

blood flowing unequally occasionally was thrown over the edge of the basin upon his trowsers, and this, also, invariably produced the singultus, although the skin was never touched; ℥xij. of blood were taken away; he was desired to lay down on his bed, and strict injunctions given that no person should be permitted to see him,—*half-past eight o'clock*; at half-past nine we returned to him, he had slept a short time, but awoke as we entered; he sat up on the side of his bed; the pulse was at 70, and intermitting; no drowsiness or increased disposition to sleep were apparent, and, he said, he did not feel drowsy,—*tinc. opii. gtt. 150, and tinc. digitalis gtt. 60*; at eleven o'clock no sleep, no drowsiness, nor any variety of pulse or symptoms, *tinc. opii. gtt. 150, tinc. digital. gtt. 60*. At two o'clock, when I called, he sprung to the opposite side of the bed, and exclaimed, “oh, don't come so near;” he apologised immediately, and said, he did not know what he did; no sleep—pulse had lost its irregularity, and was at 80—no inclination to sleep, no expression of drowsiness in the countenance. I sat by the bed for half an hour, and, during that time, he frequently spit out saliva, the action always being accompanied with much

exertion of the whole body, and short yet violent efforts of the muscles of expiration to throw it to a great distance. “What is the reason of your constant spitting?”—“Because I am afraid to swallow it; I would as soon swallow water as spittle.” I perceived he was fearful of the saliva collecting in his mouth; it did not appear to be in an increased quantity beyond what his alarm excited.

I observed that he watched the door of his bed-room, and appeared agitated if he fancied he heard any one approach up the stairs; his countenance was expressive of alarm, and he appeared minutely attentive to every little movement in his room—*tinc. opii. gtt. 200, tinc. digit. gtt. 80*; a drop of this medicine, from his hurry in swallowing it, ran down his chin, at which he expressed great horror: *at four o'clock*, no sleep or inclination to sleep, no nausea or sickness; pulse at 82, eyes a little red and slightly suffused; his watchfulness did not appear so great, and he was more calm; spitting as before,—*tinc. opii. gtt. 250, tinc. digit. gtt. 80*. *Half-past six*, no sleep or any apparent difference,—*tinc. opii. gtt. 300. Tr. dig. gtt. 100*. *At nine o'clock*, more calm, pulse 90, perspiring greatly, thought himself better, com-

plained of thirst — *tinc. opii. gtt. 300. tinc. digitalis gtt. 100*, no sleep or inclination to sleep. *Eleven o'clock*, had a little nausea, pulse at 98, had not slept; on the whole he appeared tranquil, forgot his spitting in the recital of some adventures which happened to him on his last voyage to India—*tinc. opii. gtt. 400. tinc. digitalis gtt. 120*. In about an hour his father came to Mr. Pratt's house, and informed us he was much worse; we went and found him indeed very restless; a sort of paroxysm of alarm had come on; he could not remain a moment tranquil, the spitting was constant; and he was in a state of dreadful alarm; every object that approached him seemed to excite fear, and he was now afraid of applying his pocket-handkerchief to his face to wipe off the perspiration, which was becoming profuse. One remarkable sensation he appeared to have, which was, that he could not suffer anything to come near his face if he saw it approach, but if he wished to apply his hand to his mouth or forehead, he stole it up by his side and over his shoulder, then behind his neck, and, finally, to the place he wished it. As I sat contemplating him, at some little distance from the bed, he suddenly, and with wonderful velocity,

threw himself from the bed, and for a moment clung round me; it was an involuntary effort, for which he expressed his sorrow, and said it was produced by some saliva getting down. The pulse was now increased to 120, and his looks of dismay were really distressing to behold; he complained of great thirst and I gave him some water, but all the attempts to swallow it were abortive; I left him about one o'clock, first having given another dose of *tinc. opii. gtt. 420*, and *tinc. digitalis, gtt. 130*. I prepared another dose, which I requested might be given about 4 o'clock, and then I left him in a state of the greatest morbid sensibility that can be well imagined; I saw him in the morning about 7 o'clock; he had passed a most wretched night, had vomited once a small quantity of brown-coloured fluid; he had not slept, but had been in and out of bed "a thousand times;" he had once during the night run down into the garden to drink at the water-butt, but when he came there his courage failed him; he was now excessively pale, and out of bed, and held by the arms of his father and brother; the spitting was incessant, the pulse in a most hurried state; he was persuaded he was going to die; he could not bear anything to touch his

face; there appeared a sensibility in this part beyond what I had ever witnessed; he was perfectly in his senses, but not a moment at rest, every instant attempting to jump up, and throw himself about; he talked much of his dying, and said he knew he should be happy; he asked a thousand questions, and was impatient to have them answered. The disease appeared now at its *acmè*: to attempt to swallow again was out of the question. About 9 o'clock he was anxious to take leave of his family,—which he did in a most affecting manner,—calling the younger children to him, telling them not to be afraid of him, he would not hurt them, and, after shaking them by the hand, he said, “now go down stairs like good children, and sometimes think of your poor brother.” The chief distress he appeared to suffer was, that he should die without seeing a young woman who lived in the neighbourhood, to whom he was much attached; and in the height of some of the paroxysms of the disease he intreated she might be brought; it was 11 o'clock before she arrived; he returned her her letters, gave her his pocket-book, with some trinkets, and took his leave of her in a way that cannot be described. He, in a short

time, became more tranquil, the irritability of the body appeared expended, and a general collapse of all muscular and mental energy succeeded, and he died about half-past twelve o'clock. I opened the body four hours afterwards, the viscera were all healthy, excepting the stomach, the internal coat of which was patched with inflammatory or rather extravasated points of blood; the rugæ were remarkably high and large.

The only fact we have gained from the treatment of this case is, that the sensorial powers cannot be affected by the administering of opiates, which class of medicines may, in future, be laid on the shelf; indeed, the presence of the disease of hydrophobia appears to render the body not amenable to the operation of medicine in any degree.

ART. XV.

MISCELLANEOUS REMARKS ON MEDICAL
SUBJECTS,

By JAMES SIMS, M.D. and LL.D.

Read October 4, 1813.

It being now above sixty years since I began the study of medicine, and having been the greatest part of that time largely engaged as a practical physician, I hope I shall not be deemed guilty of egotism in speaking almost solely of my own practice. Indeed, I conceive I cannot be more usefully employed at present, having retired from practice, than in collecting such observations as I have made during that time. I shall have a farther incitement to conquer the indolence of old age, should my paper be deemed worthy of insertion in their memoirs, by a society, whose kindness and attention to me, during more than twenty-two years that I had the honour

of being its president, I shall remember until my last hour. I doubt that some of the ensuing remarks may seem of little importance; but, let it be remembered, that every thing that gives any degree of ease or comfort to a sick person is of consequence. I cannot help wishing that the press gave us more empirical observations from aged physicians than fine drawn theories and hypotheses by young ones. Neither do I see much use in heaping together wonderful cases, that teach nothing, and which tend to no utility, and may not occur to the practitioner during the course of a long life. As to those cases where the whole known course of nature is set aside, on pretended or doubtful statements, I shall only say, that celebrity is often gained, in this world, by confidently relating miracles; but I do not envy such persons either their celebrity or their gains.

1.—I once intended to have finished a paper on insanity, which I had begun in the fifth volume of the *Memoirs of your Society*; but, as I find the indolence of old age fast creeping upon me, I shall only give a few hints, at present, as to its cure. Boerhaave, in his *Aphorisms*, has a most remarkable one, No. 1124,

on the subject of mania, which is as follows:—“*Frustra tentatæ per omnia remedia, varix, hæmorrhøis, dysenteria, hydrops, hæmorrhagia magna spontanea, febres terianæ, quartanæve accedentes, salutaria fuerunt.*” In addition to what is here said of intermitting fevers, I shall mention a circumstance related to me, about the year 1764, by Dr. Rutherford, then Professor of the Practice of Medicine in the University of Edinburgh, which was, that his illustrious preceptor, the great Boerhaave, used to say, that he should be able to cure almost every disorder incident to the human body, if he could produce, at pleasure, an ague. As I am of opinion that this can be mostly done, I shall beg leave to state how it may be effected. We have, in this kingdom, many low marshy countries, bordering on the sea, where agues are endemic, and where an inhabitant of the hilly inland parts can scarcely come without, in a few days, being seized with that disorder. Here, then, we have a more certain means of exciting this disorder than what even Boerhaave possessed in Holland, as the change from a dry hilly soil to a low marsh produces effects which the residents in the latter are not so readily susceptible of.

There is one thing often recommended in a high degree of mania, which I cannot help remarking upon, and that is bleeding. I have ever observed that, even in the highest exacerbations of the complaint, the pulse is, by no means a feverish one, the fury being merely a nervous one. Letting of blood, therefore, by increasing the debility, increases, also, the irritability. I think I have likewise frequently noticed that it has appeared greatly to tend to fix the disease during life.

In melancholia the case is often different, as to bleeding, when even there is a very quick, though weak and tremulous, variable pulse. If the patient complains much of oppression on the head or brain, and seems much paler and weaker than preceding circumstances would lead us to expect, I have often seen great service from taking blood either by the lancet, by cupping, or by leeches applied to the temples. In this latter case I have also found wine, spirits, and all cordials and stimulants eminently hurtful, though they would seem so proper to raise the pulse and spirits. This elevation is most certainly procured by the bleeding, when that has been properly administered.

To mention disapprobation of bleeding in mania, and to recommend it in many instances of melancholia, may, at first view, startle most practitioners; yet, I can truly say that I do not recollect a single instance to make me change that opinion. If not a bad definition of mania be, that it is tedious and violent insanity without fever, what benefit can be expected from bleeding, any acceleration of the pulse, if ever felt, being from the prodigious flurry of the nervous or sentient principle; and bleeding, if wrongly applied, by reducing the energies of the frame, increases the irritability and unsteadiness of the whole system. On the contrary, in melancholia, especially in the beginning, the patient is often greatly alarmed lest he should lose his senses, he complains of a great weight or giddiness in the head, he is restless, and even, though low spirited, much agitated, his pulse is exceedingly quick, often above 160, small and tremulous, which I venture to call an oppressed pulse, his complexion is dark, and eyes muddy, he wishes much to be left alone, yet is very uneasy when left so, with symptoms that shew great agitation of mind and body. In cases like this I think I have always seen bleeding eminently serviceable.

I cannot dismiss this subject without saying some words on its notorious and alarming increase in this kingdom. I look upon this increase to be owing, perhaps, to several causes combined. — 1st. The too great quantity of animal food and high sauces consumed here. — 2d. The great quantity of strong vinous liquors drank, which must ever be the case as long as governors find it absolutely necessary to prefer revenue to health, to prefer strong Spanish and Portugal wines to weak French ones. I say nothing here of spirits, as I believe they more frequently produce phrensy, speedily producing death.— 3d. Though last mentioned, not the least, the *auri sacra fames*, that is, the love, or, rather, the rage for money. In this kingdom, money not only procures those comforts and indulgencies in an eminent degree, which it does elsewhere, but it likewise commands that rank, that respectability, and which, in almost every other country, is only the meed of hereditary honours and antient family distinctions. I remember an old gentleman remarking to me, when I was young, that there were but three families of any respectability in the kingdom who had insanity in them, and about as many who had scrofula, and that no other

considerable families would connect themselves with them, lest their own descendants might inherit these disorders. How are matters now changed, when every person, male or female, may marry to their heart's content, if they have but plenty of money.

These, possibly, with many other causes, may all coincide in producing the present prevalence of the disorder; as I am convinced many of our complaints are owing to several causes combining to produce one effect.

I venture to speak on this subject with less hesitation than I should otherwise do, on account of my having had, from various causes, more experience in these disorders than fell, I believe, to the lot of many of those gentlemen who confine their practice to that branch of the profession, owing to my successful treatment of some cases that fell to my care, and, also, to the unwillingness, which is exceedingly felt in the mercantile part of London, where my practice chiefly lay for about forty years, to have their reputation for sanity called in question, by having the attendance of a medical gentleman who was known to practise solely in that way, or having his carriage seen at their door.

2.—Having, in the last section, descanted on the benefits arising from the change of air, I shall here mention another disease in which it has been very generally recommended, without its being sufficiently determined how far that change should be carried in particular cases. Every person, in any practice as a physician, must have often heard of, and even recommended a change of air in consumptions of the lungs. And the hot wells, near Bristol, some years back, very deservedly acquired a character for curing many bad cases of that complaint. But, at present, I fear their estimation is on the wane, owing to the imprudence of the builders. When I was there, four years ago, the person to whom one of the pumps belonged, avowed to me the decline in reputation of the wells; but ascribed it to the injudicious (as she thought) writings of Dr. Beddoes in their favour. As I do not assent to this cause, I may be allowed to produce my own opinion. There were two causes that contributed to the former celebrity of the place; one was, the nature of the warm water itself; the other, (and not the least,) was the low, warm, sheltered, situation where the patients resided. But that is now altered; the

part chiefly sought after is on a bleak hill, near three hundred feet, perpendicular, above the old wells. This place, which is called Clifton, is now thronged with buildings sufficiently commodious to attract the visitors to it, but I think a more inconvenient situation for pulmonary patients could not well be chosen, being almost constantly visited by violent gusts of north-west winds, from the Welsh mountains and the sea up a deep valley gradually more and more pent in, until they are at last discharged, with their accumulated force, upon Clifton. Indeed, whoever examines the trees in front of Gloucester-row, a place dedicated to lodging-houses, will see them all miserably stunted and bent in a surprising manner, from the north, in the shape of an inverted L, or thus Γ , as if they all partook of a diseased climate. Most of our consumptive patients are seized with the complaint in hilly situations, where modern chemistry will tell us oxygen abounds. Is it proper to inculcate a change to a place where it probably more abounds, though sufficiently healthy to other persons in a dissimilar state of health? I shall give a case of the success of a contrary plan of acting:—A young lady, obviously far gone in a pulmonary

consumption, applied for my advice since I quitted practising my profession for gain. As I thought she could only be saved by uncommon methods, I advised a removal to a very aguish part of Essex. As I thought she might require medicines whilst there, I agreed to accompany her to a relative's house on the spot. The consequence was, that, within three days, she was seized with a tertian intermit- tent, and did not cough once after the second fit of the ague. I kept her there until she had seven, or eight regular returns of the paroxysm, and then, bringing her to London, easily stopt the ague, with proper remedies. Here then was a great change of the atmosphere, attend- ed with its proper effects, a highly dangerous complaint giving way to one easily removed ; and it may be questioned whether most of the practice of physic be not substituting an easily removable disorder for one more diffi- cult and dangerous. Does not an emetic or pur- gative produce disorder during its action ? Is not mercury, when it cures the venereal com- plaint, often productive, at the same time, of very violent complaints ? But to return to the Bristol hot wells ; is there not just oppo- site to them *Long-Ashton*, a charming spot,

where vegetation seems peculiarly to thrive, and separated from the wells by only a narrow river, over which there is a ferry of a few yards. Here, amidst charming meadows and delightful green lanes, the invalid might enjoy what little exercise he could take, sheltered by the high surrounding hills from all noxious winds, and refreshed by the pleasing gales passing over as fine a spot as, perhaps, any in the kingdom. But, fashion! how many victims to thy arbitrary sway hast thou to answer for!

3.—I have been in the habit, for above forty years, of prescribing a bath to various patients, which I call the brine-bath. I believe I may assume the merit of it, if there be any, having never met with any other medical man who ordered it. It is thus prepared:—Take as many gallons of water as will fill the third of the bathing-tub you intend to use, to this add about as much common sea salt as there was water; if the water be boiling at the time of using it the whole will be immediately dissolved; if not, some of the salt will remain granulated in the bottom at first, but which will be gradually dissolved. Indeed, I make a rule to keep constantly a little of the salt undis-

solved in the bottom of the tub. This bath will keep good, I may say, any number of years, as I have known of it keeping two years, and, at the end of that time, apparently, as pure as at first. Any scum, it gathers on the top, is to be carefully taken off; a cloth kept over the tub, constantly, to keep dust out; and, as the water slowly wastes, it is to be replenished, from time to time, with fresh water, adding salt, at the same time, in proportion. I know one gentleman who was so accurate in keeping it up to the proper strength, as to use a hydrometer for the purpose; but I prefer keeping some of the salt in the bottom of the vessel undissolved. As it keeps good a number of years, it is far from being expensive in the end. As the brine would excoriate the fine skin of the inner parts, the mouth and eyes are to be shut when using it, and the ears to be stopt, but how is the nose to be done so?—the hands, not being to be spared for that purpose, being requisite to raise the person up, by catching hold of the sides of the bathing-tub, and any plug introduced into the nostrils is immediately blown out by the breath. To obviate this difficulty, let a piece of cork wood be cut into the form of a small horse-

shoe, and this, by its elasticity, will fix upon the nose, without hurting it, so as to prevent the water from entering. Nervous weak persons, for whom bracing is requisite, often cannot bear a cold bath of common water, nay, even of sea water; but I have always found them to bear this without injury. Also, if laid aside at any time, on account of indisposition, it may be begun again in the midst of frost or snow, without danger of catching cold. Persons come out of it with a glow on their skin and very agreeable sensations. A sponge or towel may also be wetted with the brine and used all over the skin, where the bathing-tub cannot.

4.—To recommend a styptic, that, I believe, is but little known, may appear an arduous task, especially as its simplicity may seem to derogate much from its consequence; though, in my opinion, it greatly adds to it in reality. In hæmorrhages, from the nose, I have been in the habit, for above forty years, of ordering a common cork to be lighted at a candle, and, as it burns, scraping gently off the black burnt powder. This powder is to be strongly and repeatedly snuffed up the bleeding nostril or nostrils, and I never knew it to fail in stopping the bleeding im-

mediately, except in one instance, which was a case of fatal cancer of the nose, face, and eye, that came under my care at least forty-five years ago ; and, even in this case, it stopt the hæmorrhage for several times repeatedly, but the bleeding always returned after some time, when the coagulum, formed by the blood and powder, came away, until at last the patient sunk under his accumulated miseries. After the powder is used, care must be taken not to disturb the black plug which it forms in the nostril, by blowing or picking the nose, until that plug falls away of itself. I shall here mention that I have seen cases where it has been reputed to have failed, owing to its being snuffed up leisurely and gently ; but on my arrival, and making it to be done strongly, it immediately succeeded. Indeed, its effect, in these cases, is so instantaneous, as to seem like magic. I apprehend that its virtues depend upon its forming a hard cake with the blood, and that its great lightness enables it to penetrate, by being strongly snuffed up, into the cavities of the nose, where heavier powders and liquids cannot enter. I shall not say any thing about hæmorrhages from other parts, as these usually come under the

care of the surgeon, but think it well worthy of a trial. I have used this application successfully in the obstinate hæmorrhage that sometimes succeeds drawing of a tooth.

5.—Zincum vitriolatum, or white vitriol, is known as an emetic, but, I believe, vastly less used than it deserves to be. In pointing out the usefulness of this medicine, as an emetic, I beg leave to state a case which I had early in practice, though it must be apparent that it was by no means the first instance in which I had used it. A young lady of fortune, to whom I had prescribed it, would not at first, on any account, consent to take any emetic, as she had taken them of several kinds and had always been by them brought to death's door, to use her own expression. At last I got her to consent, on condition that I staid with her during the operation, as I assured her I could stop its operation, the moment she found it troublesome. I gave her a scruple of the medicine, which is the smallest dose I usually allow. It operated speedily as it always does, and she was continually vomiting for more than an hour before she would allow me to stop it, as she said that the exertion did not distress her in the least, as the

former vomits, both of ipecacuanha and anti-monial wine, had done; and, as I had convinced her vomits would do her good, she was resolved to have the full benefit of them. At last I prevailed upon her to take about a thimble full of brandy; after which she did not reach once. And afterwards, until well, she often requested, and had the same vomit administered. The reason that this emetic operates with so little distress upon the system seems, to me, to be as follows. Other emetics produce their effect by bringing the diaphragm and abdominal muscles into very strong contraction, so as to squeeze out the contents of the stomach by that contraction. But the white vitriol appears to evacuate simply by the contraction of the stomach itself, without any assistance from these muscles; and as we know that when Nature sets about any work, she mostly brings into play all the organs requisite to facilitate it; so, I believe, she relaxes the upper or left orifice of the stomach at the same time, so that a very slight contraction of itself forces its contents upwards. I can also aver that I never once saw brandy to fail in stopping, instantly, the operation of the medicine. I must here mention another circumstance in

its favour, which is, that the sickness produced by no means equals that caused by any other emetic that I know. The dose may be varied from one to two scruples.

6.—We have of late had several persons who boasted they could cure cancers; some of them came from America, which continent seems, at present, to produce as many, as formerly came from the North, under the denomination of high German doctors. All their pretences, however, are derived from their healing some ill-conditioned sores, and from the innumerable lies and puffs that they insert in the public newspapers, or pay needy persons to tell for them. This is the trade of all quacks, and of which, perhaps, there is more practised here than in all Europe, or, even, the world besides. As soon as one of these is brought to a real case of cancer, if he cannot extract immediately money from the unhappy patient, or his friends, he declares that the case has gone too far, or has been improperly treated. I have said thus much about cancers, because the remedy I am going to propose, in other cases, was about fifty years ago much praised in them; and, I believe, with more reason than many others, though, I verily

believe, neither it nor any other remedy, except the knife, ever cured a single one: yet, as I have known it often mitigate the pain, and lessen the offensiveness of the discharge, I think it entitled to some degree of praise. The remedy which I am praising is a carrot-poultice applied to the ulcerated part.—I have seen such excellent effects from it in cancers, and also in foul obstinate ulcers, and in scrofulous ones, that I think I can scarcely recommend it too much. It requires no course of preparatory medicines, and does not disagree with any internal ones, that may be thought requisite in the case. The way of preparing the poultice is as follows:— Take as many carrots (I prefer those called Sandwich ones to any others) as you judge necessary to cover the sore and a considerable way round it, to the thickness of a quarter of an inch or more. Having washed and cleaned them, let them be grated small, or, if a grater be not at hand, they may be scraped to the requisite fineness. Then spread this powder, which will seldom need any water to bring it to a proper consistence, upon a proper piece of linen cloth, and let it be held before the fire, so that the side which is to be applied to the sore may acquire a degree of warmth,

just comfortable to the feel of the affected part. This poultice is to be changed two or three times a day, or even oftener, should it appear requisite, taking care to admit the air as little as possible. In two or three weeks it mostly shews its utility, by contracting greatly the sore, and giving it a more healthy appearance; and in the end it seldom fails of completing the cure in all cases but those of real cancer; yet, even in these it greatly alleviates the pain and lessens the offensiveness of the discharge. This I have often seen happen after plasters and ointments have been used without the smallest benefit for very many months.

7.—Single cases, where they can be accurately known and stated, have great utility, and the world seems always to have been of this opinion, by the avidity with which they are read, notwithstanding judgment being given decidedly against them, by some authors of considerable celebrity. I beg leave, therefore, to state my own case of deafness. For these ten or twelve years I have been in the habit of losing my hearing once or twice a year, or even oftener. I have no apparent marks of having caught cold at the time; and, even when I have had a cough and other marks of catarrh

lasting for a number of weeks, it has often not been attended with the least deafness. My left ear is the one almost always affected, but the right one even sympathizes so much with it, as to lose its hearing almost in the same degree with the other, and to recover it at the same time, when, by applications to the left alone, that recovers its faculty. During the time that I am deaf, I have a constant noise in my left ear (when that is the one most affected,) like the falling of water in a cascade, or the blowing of a high wind; this noise varies exactly in proportion to the degree of the deafness. The complaint does not occur at once, but is several days, nay, weeks, increasing, if I let it go on, without interruption; and, in proportion to the time it has lasted, I find the time necessary for its cure to increase. The process which I have hitherto found efficacious, I have found to succeed sometimes in a fortnight, at other times I have been obliged to continue it five weeks, or even longer, before I have found relief. Once when, unaccountably, I had let the disorder run on for many months, it was nearly half the time before unremitting perseverance, in the usual means, brought the requisite relief. The means I use

are as follow:—I begin by having every night, on going into bed, a few drops of a strong solution of soap in water, dropt warm into the ear affected; I then lie upon the opposite side, until I fall asleep, or as long as I conveniently can. This course I repeat every night, and after having done so for several successive nights, I have the ear in the morning syringed either with a solution of soap, gently warmed, to which a little brandy is added, or with tincture of myrrh and water, a little warmed. I then at night begin the same process over again, and have, at times, had the satisfaction of having hearing restored by the second syringing; at other times I have been obliged to persevere for several weeks and eight or ten times syringing. The last time, and that happened only lately, I shall mention on account of some particular circumstances. From accident and inattention I had allowed the complaint to go on for a longer time than usual, until it became truly distressing in company, where I could not hear a word that was spoken, ever so loud, if the person was six feet distant; nor was my watch, unless laid in contact with my ear, in the least audible to that, and my faculty of hearing, even in my ear that was well, be-

came more indistinct than usual, though it had always been in some measure so, when one was affected. After using the process for eleven times, I began to be uneasy seriously at finding not the least benefit, and considering that this was not the ear in which I had mostly before been affected. I, however, determined to persist for ever so great a length of time, as I could not endure the thought of being always deaf, and luckily the twelfth time of syringing succeeded. At first, when I began this practice with myself, I continued nightly to drop in the soap-suds a whole week between each time of using the syringe; but, now, I have it used every three or four days. Each day that it is used, the full of the syringe is pretty forcibly thrown up into the outward cavity of the ear six or eight times, or even oftener, so as to be certain of its reaching the tympanum: I discover the cure being effected by hearing on that side the ticking of my watch at a yard, or even greater, distance, and, on coming into the street, the sound of carriages is even inconvenient. There is almost always some wax, or cerumen, coming away at last, when the process is successful. I may mention here, that I have been seventeen times relieved by this pro-

cess, which, I doubt not, arises from dissolving hardened cerumen.

8.—Having said so much of myself in the last paragraph, it may savour of egotism to mention another complaint to which I was formerly, I may say, a martyr, but from which, by proper management, I am now, in a great measure, freed. — This is the tooth-ach. The tooth-ach, I suppose, because it does not kill, has been almost universally thought beneath the attention of the physician or surgeon. But, surely, the allaying or preventing of pain can never be beneath the study of a medical man, whose motto should be, in respect of disorders, “*Homo sum, humani nihil a me alienum puto.*” This complaint not only severely distresses a person for days, nay, weeks, but often unfits him for business, or application of any kind, during its continuance; at least, such was the case with me for twenty years, during which time I do not think I was ever three months, at any one time, free from a fit of it, sometimes so severe and attended with such swelling as to give apprehension of an abscess in the cheek, to prevent which, one evening I applied eighteen leeches to the cheek before I got any relief. Above forty years ago I began to

consider how I might get rid of the frequent recurrence of this malady. As I knew hard bodies were most liable to be dilated and contracted by heat and cold, I conjectured that the nerves, in the cavity of the teeth, could not bear that sudden distention and contraction without pain, especially frequently repeated in a high degree, which I thought my observation also on myself warranted. The degrees of heat and cold, therefore, marked by Fahrenheits thermometer, I began to consider as the true regulation of all applications to my teeth, and, to bring these degrees to be as nearly equal as I could, I thought might prove of great consequence to me. That is, if I could expose my teeth to as little variation in that respect as the state of my health and necessary worldly transactions would allow of, I should probably much mitigate, if not conquer, this most teasing complaint. I farther considered that I could not prevent my teeth being at times exposed to as great a degree of cold as most others, and that very rarely indeed went so low as twenty degrees on this thermometrical scale, but that, in the higher part of the scale, my latitude was great indeed, and which might be easily abridged. I found that I, as well as

others, often took food or drink, as soup, broth, or tea, heated up to a hundred and sixty, or even higher, on the same scale. Here then was a variation in the scale of at least one hundred and forty degrees, which must produce an adequate variation in the teeth; for, it is to be observed, that heat and cold produce greater changes in hard bodies than in soft ones; and the teeth being the hardest part in the frame are most affected. From all this reasoning I resolved to put nothing in my mouth hotter than my own blood; here, then, the scale was reduced at once from one hundred and sixty to ninety-six; so that the whole variation was brought from one hundred and forty degrees to seventy-six. It required no little attention to persevere in this plan for several of the first months, being often requested by others, and tempted by my own former depraved inclinations, to take warmer things; my tea and soup I was told would be mere slop, my meat was cooling and spoiling on my plate, &c. but the greatest difficulty I had to combat was my own forgetfulness and inattention, especially as I did not perceive, at first, all the benefit I expected. But, at the end of about half a year, I was amply repaid

for all my reasoning and all my care. In the forty years succeeding that time I have had but four fits of the tooth-ach, and these much slighter than formerly, as I sooner took the certain means of relieving them. Three of these were owing to inattention to my own rules; and the fourth was owing to a cause which I shall relate at full length. Some years ago I was made a present of several jars of Minorca honey, and, being very fond of it, I spread some of it, every morning, on my bread and butter, and often also in the evening. After persisting in this course about six weeks, I found that my teeth began to ache, especially on tasting any of the honey; and, as I preferred living in ease and comfort to the gratification of my palate, I gave away all my remaining honey, lest I should be tempted, at any time, to renew the eating of it. I should here mention that I find no bad effects from sugar used profusely in my diet, and that I can now eat ice-creams as copiously as any one I meet with. I have recommended the mode above-mentioned to many of my acquaintance, and can say that I find every one of them has found a cure who has had attention and perseverance to follow the prescribed plan, during the rest of their

lives. I mentioned during the rest of their lives, as I find, by my experience in myself, that a deviation from it never fails of bringing its own punishment. It may be said, indeed, that this is too great a sacrifice, to avoid merely pain, unattended with danger; but I find it no sacrifice at all, as I am now as fond of cool things as ever I was of hot ones; and those who have followed my plan, declare to me the same thing. I must also mention that I have had several teeth decay during this time, without any *pain*, which I consider the principal thing to be avoided. I once endeavoured to convince a celebrated dentist of the propriety of advising my plan, but he told me very candidly, that he could not do it, as he should gain nothing by the advice; nay, perhaps, might lose considerably by it. As to remedies, during a fit of the tooth-ach, I have found none so useful as rubbing strongly the gums with *tinctura thebaica*, until relief is found.

9.—I hope I shall not be accused of trifling in mentioning another complaint, unattended with danger. Gouty persons and old ones are often very liable to cramps in the limbs. As these come on at night, in bed, I thought they were probably owing to the blood returning

from the lower extremities too easily to the heart, both on account of the recumbent posture, and the want of the restraint and ligatures which it has in the day; I, therefore, ordered my patients to wear their garters fixed above their knees at night, and, in some few cases, have allowed them to wear stockings also, the former not appearing quite sufficient. The first fee I ever had, from an English gentleman, was about fifty years ago, when I had mentioned this mode of cure, on his accidentally mentioning the uneasiness he suffered from the complaint. In some months afterwards happening to meet with him, he insisted, to my no small surprise, as I had forgot the circumstance, on my receiving two guineas, the one he said was for totally curing him, and the other was for doing it without medicines. There are few more painful and troublesome complaints than this, and, as the common cure prescribed for it is exposure to cold air, many severe colds are caught from it. The relief, however, procured by this way, arises from another cause. In rising out of bed the contracted muscle is necessarily mostly stretched; and it is this extension alone that procures the present relief. At the time any person is under

the influence of the cramp, let him extend strongly the contracted muscle, and he will find relief for the present, but no immunity from its future returns, which I believe is only to be procured by the foregoing method.

10.—The *Materia Medica*, in its largest sense, takes in all those things that can make an alteration in the human frame, whether by producing health or disease. Those things alone that tend to produce the former, when it is lost, have been generally looked upon as forming it; but as every thing that can do good when properly applied, can do harm if improperly used, so its latter qualities are requisite to be investigated as much as the former. The term has been also mostly applied to those medicines only which are prescribed by medical men to restore lost health. I think it should be still farther enlarged by taking in all the non-naturals as they are called, as also all things that can do hurt in any particular case; but of this more hereafter. This may be said to be infringing on the practical part of medicine, as usually delivered, but let it be considered that the person who travels between any two places, will, in returning the very same road, have very different views of the same

objects; it is true he might have the same views if he turned back at every step to see them in the reversed position, but this he seldom does. The *Materia Medica* has then this advantage, that it gives a totally different arrangement of the subject, and I am persuaded that different arrangements of the same subject are preferable to any one, which, in the present limited state of our knowledge, must be very imperfect. In treatises on the practice of medicine we usually take some disorder and endeavour to investigate all those things that may be beneficial in it; for, as to those that may be generally or partially hurtful, they are often disregarded. On the contrary, in the *Materia Medica*, we take some one medicine or alterative, and examine all its useful or noxious qualities, both in health and disease. I say alterative here not in the confined sense of applying it only to some particular medicine, (such as quicksilver,) which is supposed to work a change in the system, but all those things which can procure any change; in which view the non-naturals stand very high.

Whoever examines the treatises that have been written on the *Materia Medica* will, I think, be convinced, that, for near two

thousand years, nothing but words derived from unmeaning theories, long since exploded, have been added to our stock of knowledge, if vague inexplicable terms can be said to add at all to our knowledge. As, however, my former preceptor, the late ingenious Dr. Cullen, has endeavoured to reduce the unmeaning chaos into some sort of intelligible method, and his system and arrangement is the best with which I am acquainted, I shall chiefly confine my remarks to it, and only endeavour to give hints towards its enlargement.—The reasons that appear to me to require it to be enlarged are so many, that to attempt giving them would require much more pains and attention than I am, at my time of life, capable of bestowing. The particular organs of the human body appear to be affected by specific stimuli and sedatives, and those which contain or secrete fluids may have those fluids increased, diminished, or altered. It is upon this base that I shall proceed to erect those divisions that I beg leave humbly to propose to be introduced into this subject, encumbering myself with as little theory as possible ;—instead of the word medicines, I use the more general word, things, as I think a me-

dical man should be able to give assistance to those who confide in him, not only from the apothecary's shop, but, also, in the way of diet, regimen, exercise, and all other things that affect the human frame.—I shall begin with the stomach, and those things that affect that organ, and then proceed to the evacuations, secretions, &c.—

1. Aliments.
2. Those things that evacuate the stomach, *emetics*, as *zincum vitriolatum*.
3. Those things that restrain that evacuation.
4. Those things that alter its contents.
5. Those things that evacuate the bowels, *laxatives*, *purgatives*.
6. Those things that restrain that evacuation, or produce costiveness.
7. Those things that alter that evacuation, as steel, sulphur, *astringents*.
8. Those things that promote the secretion or discharge of urine, *diuretics*.
9. Those things that abate or restrain that discharge.
10. Those things that alter that discharge, as asparagus.
11. Those things that increase the sensible

or insensible perspirations, *diaphoritics, sudorifics.*

12. Those things that restrain those evacuations.

13. Those things that alter those evacuations.

14. Those things that increase the discharge from the lungs, *expectorants.*

15. Those things that diminish that discharge.

16. Those things that alter that discharge.

17. Those things that increase the discharge from the eyes and nose, *errhines, sternutatories.*

18. Those things that diminish those discharges.

19. Those things that alter those discharges.

20. Those things that increase the discharge from the ears.

21. Those things that lessen that discharge.

22. Those things that alter that discharge.

23. Those things that increase the discharge from the salivary glands, *sialagogues.*

24. Those things that lessen that discharge.

25. Those things that alter that discharge, as mercury.

26. Those things that increase the secretion of milk, as porter.

27. Those things that diminish that secretion.

28. Those things that alter that secretion.

29. Those things that increase the secretion of bile, as butter, fat.

30. Those things that lessen that secretion.

31. Those things that alter that secretion.

32. Those things that increase the menstrual discharge, as electricity, *emmenagogues*.

33. Those things that lessen that discharge, as milk.

34. Those things that alter that discharge.

35. Those things that increase the discharge of semen, as oysters, *aphrodisiacs*.

36. Those things that diminish that discharge, as coffee, *antaphrodisiacs*.

37. Those things that alter that discharge.

I have placed all these divisions in the first place, being more the subject of observation than of theory and hypothesis. I shall next proceed to those things that change obvious functions of the frame: in doing this I fear that I shall appear to be deficient greatly in order, being chiefly anxious not to omit any.

38. Those things that kill in a small dose, *poisons, narcotics*.

39. Those things that are supposed to be antidotes to them, *alexipharmics*.

40. Those things that increase the moisture of the system.

41. Those things that lessen it, *exsiccants*.

42. Those things that promote acidity in the *primæ viæ*, *acescents*.

43. Those things that lessen it, *antacids*, as *alcalis*, absorbents, and liquorice.

44. Those things that promote putrefaction, *septics*.

45. Those things that lessen or stop it, *antiseptics*, as carbon, fresh earth.

46. Those things that corrode, *acria*, *caustica*.

47. Those things that abate corrosion, *antacria*, as unctuous substances.

48. Those things that generate worms in the first passages, as crude vegetables.

49. Those things that destroy or expel them, *anthelmintics*, poisons.

50. Those things that generate flatulency, as peas.

51. Those things that prevent it.

52. Those things that expel it, *carminatives*.

53. Those things that produce a scorbutic diathesis, as salt provisions.

54. Those things that correct it, *antiscorbutics*, as fresh vegetables, malt.

55. Those things that produce fat or obesity.

56. Those things that lessen it, acids.

57. Those things that attenuate the fluids, *diluents*.

58. Those things that incrassate them, *in-spissants*.

59. Those things that render them bland, *demulcents*.

60. Those things that produce calculi, as, perhaps, *acescents*.

61. Those things that prevent or dissolve them, without septics, as alcalis, absorbents.

I come last to those things that, though they make a great change in the present functions of the parts, yet cannot be shewn to make so evident an alteration as most of those I have mentioned.

62. Those things that contract the solids, *astrigent*.

63. Those things that relax them, *emollients*.

64. Those things that invigorate them, *tonics*.

65. Those things that throw them into irregular contractions.

66. Those things that relieve them from such contractions, *antispasmodics*.

67. Those things that stimulate the solids, *stimulants*.

68. Those things that allay stimulus, *sedatives*.
69. Those things that elevate the animal spirits, *cordials*.
70. Those things that depress them.
71. Those things that produce heat, *calefacients*.
72. Those things that lessen it, *refrigerants*, as nitre.
73. Those things that produce pain.
74. Those things that lessen it, *anodynes*.
75. Those things that produce sleep, *narcotics*, as opium.
76. Those things that prevent it, as tea, coffee.
77. Those things that produce ebriety, as wine, spirits, *lotium temulentum*.
78. Those things that prevent or lessen it, as coffee.
79. Those things that increase the appetite for food, as bitters.
80. Those things that lessen it.
81. Those things that invigorate the voice.
82. Those things that weaken it.
83. Those things that sweeten the breath, as aromatics.

84. Those things that render it offensive, as garlic.

85. Those things that create thirst, as salt meats.

86. Those things that quench it, as acids, diluents.

But, as most of these are derived from theories now in vogue, they may, perhaps, disappear along with them. I know, indeed, it may be unwelcome to many to admit the smallest doubt as to any present opinions in medicine; those of the present day are believed perfect, whilst we readily admit the imperfections of all former ones. I need scarcely hint, that many of these classes are particularised chiefly with the view of the things in them being avoided. It is, therefore, chiefly with a view to this, which I have extremely often found the necessity of in the practice, that I have ventured to propose the foregoing plan, and some few times to mention such articles to elucidate it as occurred to me at the moment. Zach. Platner, in his *Ars Medendi*, seems, in proportion to the shortness of an elementary work, to have dedicated as much attention to the pointing out such things as do hurt in each disease,

as any writer that I know of. I have mentioned the article of poisons, though I should be inclined to doubt the existence of such a thing. If the definition of poison be taken from its power of killing, I am afraid beef, mutton, and all our best nourishments, improperly used, kill more persons than all those things usually called poisons. If, again, the definition be limited to those things that kill in a small quantity, do not all our best medicines the same. If it be still farther limited to such things as are universally hurtful to the human frame, I much doubt whether the Supreme Being ever created anything that is so.—Animal poisons and deleterious airs may be reckoned exceptions, yet, I imagine, in the great scale of nature, the supreme intelligence found them somewhere useful and necessary to man, his obviously first and greatest care. As to the classes of stimulants and sedatives much may be said; all those things which cause or restrain the evacuations may be classed generally under these heads, and so may, indeed, most of the *Materia Medica*. But there are, likewise, specific stimulants, as cayenne pepper is highly stimulant to the tip and edges of the tongue, and but little so to the root of that

organ and stomach, as may be found, if it be laid near the back part of the tongue, and swallowed without having any communication with the other parts of it. The sedative effects of belladonna upon the pupil of the eye, begin now only to be known more generally, although they had been mentioned above a century ago by a celebrated writer. But I beg leave here to break off, as to descant upon particulars would neither be consistent with my plan, nor that of the Society. What I have said must merely be considered as a slender outline.

I was consulted for a young gentleman who had suddenly, but permanently, lost both his sight and hearing. His health was, however, restored, but the wretchedness of his situation may be easily conceived, thus cut off almost from all intercourse with mankind. I advised the language of the hands, but the common language, used at most boarding-schools, would not do here. Besides, how was he to be taught it, or, indeed, any other method of having the thoughts of others communicated to him. I directed the capital letters of the English alphabet to be cut in wood; these, on directing his fingers over them, he readily knew. I then desired him to be taught a language of

my own. In this I only borrowed from the one commonly used, the symbols of the five vowels, and the whole stood thus. After making him trace the letter A in wood, the point of his thumb was touched by a person who was employed to be always with him; the letter B was then brought forward, and the first joint of the thumb next the end was taken between the thumb and forefinger of the assistant; for the letter C the second joint was, in a similar manner, taken hold of; and, for the letter D, the third joint, or that next the wrist; for the letter E, the point of the index, or forefinger; for the letter F, the first joint of that finger; for the letter G, the second joint of that finger; for the letter H, the third joint or that next the wrist; for the letter I, the point of the middle finger; for the letter K, the first joint of the middle finger; for the letter L, the second joint of that finger; for the letter M, the third joint; and for the letter N, that I might not displace my vowels, and unnecessarily confuse his memory, I ordered the assistant to press the point of one of his own fingers in the midst of the palm of the patient's hand; for the letter O, the point of his third finger, or the one next his little finger; for the letter P,

the first joint of that finger; for the letter Q, the second joint of that finger; for the letter R, the third joint of the same finger; and, for the letter S, the assistant pressed the point of his finger against the middle of the inside edge of his hand; and, for the letter T, the point of his finger was pressed upon the middle of the back of the patient's hand; for the letter U, the point of his little finger was pressed upon; for the letter W, the first joint of his little finger was pressed; for the letter X, the second joint of the little finger; for the letter Y, the third of the little finger, or that next the wrist; for the letter Z, the elbow was pressed; for the consonant V, the shoulder was pressed. During this whole process great care was taken to connect in his mind the letter of the alphabet and the symbol, but, before he had gone through one half of it, he became quite expert at learning, indeed more quick than his assistant. His wants were made known, and his answers were returned by his voice, that being luckily no way impaired, except that in time the tone of his voice somewhat altered; becoming, in some measure, like a speaking machine, I once saw, made by a shopkeeper, in the town of Lurgan, which,

by means of clock-work, and many organ-stops repeated a great number of sentences, but in a hollow tone of voice, as if the person had a singular defect in the organs of speech, though still intelligible, and even much more so than a parrot. I need not describe the extasy that he shewed, on being thus restored to a communication with mankind. As he could write very well before his calamity assailed him, he soon became tolerably adroit at that art by the help of a mahogany rule giving lineality to his hand. In time he scarcely needed that assistance, his knowledge of strait lines becoming wonderfully correct, insomuch that I am convinced he could have walked strait over a bowling-green, which I believe few persons who see can do when their eyes are muffled; for I have seen them frequently come out at the side they went in at.

The common language of the hand may seem, at first sight, only a plaything for children, but I know it may be applied to very beneficial purposes. A near and dear relative of mine lately lost the use of her speech, her other faculties being little impaired; I, therefore, bought for her a coloured print of that language, sold by Mr. Bowles, of St. Paul's church-yard,

and got not only her but the rest of the family to learn it. I observed, that, in this case, when she could not, at any time, make herself intelligible, she became more quick, and, therefore, less understood. As it is known that, when stammering persons cannot bring forth their words, desiring them to sing it has the effect; I often, therefore, desired her to sing, or to speak very slowly; but this not succeeding, I always desired her to spell it on her fingers. So much, then, for the utility of this, apparently, children's toy, as it may be thought,

ART. XVI.

A CASE OF IMPREGNATION IN A WOMAN WHOSE
VAGINA WAS SCARCELY PERMEABLE.

By JOHN SQUIRE, M.D.

Physician to the Lying-in Charity, &c.

Read Oct. 2, 1815.

MRS. K———, a healthy young woman, was married in October, 1814. On Wednesday evening, the 16th of August, 1815, she fell in labour, and was attended by a midwife; on the following day I was requested to visit the patient. By the usual examination, no entrance was perceivable into the vagina, the orifice of the passage being closed by strong columns of a membranous and fleshy substance, which united the sides. In this situation of things, I was desirous of a consultation, and Dr. Davis, of Charlotte-Street, Bedford-Square, Physician to the Queen's Lying-in Hospital, was called in. On minutely examining the parts, a small aperture was perceived in the anterior part, near the orifice of

the urethra; this aperture was just large enough to admit the introduction of a small goose-quill. It was determined, without hesitation, to enlarge it, and Mr. Taunton was requested to undertake the operation, which he did in the following manner.—The patient remained on her left side, the thighs were separated by a pillow, and a director introduced into the vagina through the small opening already noticed. The end of the director was pointed toward the perinæum, while its handle was supported by Dr. Davis, who was placed anterior to the patient. The intervening substance was then divided along the groove of the director, with a scalpel; the hæmorrhage was trifling, so as to require no particular attention. The poor woman, with great patience, underwent a tedious and painful labour until three o'clock on Sunday morning, the 20th of August, when she was delivered of two female children, who, with the mother, are doing well; the parts, excepting what has been related, were all in a natural state.

Mr. Laxon, (one of my pupils,) an intelligent and very attentive surgeon, and Mr. Richard Eyles, a practitioner of ability and experience, humanely attended the complete

progress of the labour; and by their prudent management in regulating the conduct of the patient, (and, what is often much more difficult, that of the company and visitors,) essentially contributed to the safety and success of the events, which proved as fortunate as could be wished. The subject of this history being interrogated as to the sexual intercourse; replied, that it always proved fatiguing and painful. The mother of the patient observed to me, “ at the age of six months I discovered
“ in my daughter a small opening not larger
“ than the size of the head of a corking pin,
“ where an entrance might have been looked
“ for.” The woman had menstruated regularly from the time of her puberty to that of her pregnancy.

Burns has mentioned not very dissimilar appearances, and Van Swieten has recorded several instances of obstruction from various causes, observing — “ *Frequentius tamen*
“ *talis concretio, post morbos harum partium,*
“ *excoriationes, inflammationes, ulcera, &c.*
“ *sequitur; et tunc superveniens vocatur.*” These instances, practitioners in general must have witnessed, and that they most commonly give way to the powers exerted in parturition.

The same author proceeds in relating many different kinds and degrees of obstruction; and, to his two last cases, subjoins the following remark—“*Docent bini hi casus magna prudentia opus esse antequam statuatur, matrimonii consummationem impossibilem esse ob nimiam angustiam partium genitalium.*”*

In the twentieth volume of the Philosophical Transactions there is related a case of “concretion of the *vagina*,” which arose from inflammation succeeding a difficult birth about five years before. “The membrane was lacerated and the opening dilated by the *speculum matricis*, in order to forward the birth; which being done, a profuse hæmorrhage immediately followed, which so much weakened the unfortunate woman that she expired in six or seven hours after she was delivered of a dead infant.”

The case above related is not exactly similar to any on record. It may, therefore, be considered an additional confirmation of Van Swieten’s caution.

* Vide Van Swieten Comment. in Aphor. 1290.

ART. XVII.

A TUMOUR OF EXTRAORDINARY MAGNITUDE,
SUPPOSED AN ANEURISM, ATTENDED WITH
UNCOMMON CIRCUMSTANCES.

By JOHN MOODIE, M.D.

One of the Physicians to the Bath City Dispensary.

Read, first time, 11th December, 1815.

HUMPHREY ENGLAND, aged twenty-four, of a strong and healthy constitution, groom to a family in this city, on July 3d, 1803, was brought to my house in a chair, so much reduced by extreme pain and debility, that he was unable to move without support. He was recommended by a subscriber to a charitable institution, and requested to be admitted into the Bath City Dispensary.

The narrative of the case of this unhappy sufferer, antecedent to the present period, was circumstantially and minutely related to me

by himself; the most material facts being fully confirmed by the domestics who had constantly attended upon him, as well as by some respectable and intelligent persons, who had occasionally seen him during his illness, and on whose veracity I have the utmost reliance.

The patient informed me, that about the beginning of March, in the year above-mentioned, whilst employed in heaving trusses of hay, from a waggon into a loft, he supposed that he had sprained, or otherwise hurt, his left arm, which, at the time, and, for some days after, occasioned a painful and acute sensation at the superior part of the shoulder on the same side. However, upwards of a fortnight subsequent to the accident, the motion of the arm was complete with little pain or inconvenience. During this time, he had been daily employed in dressing his horses, carrying pails of water, and performing other business in his ordinary occupation. Hence, there did not appear any reason to apprehend a luxation of the *os humeri*, or that the parts about the articulation had suffered any material injury.

As, however, he now and then experienced

pain, and some slight enlargement of the shoulder was suspected, an eminent surgeon in this city was consulted. On examining the arm, not finding any signs of dislocation, he ordered a blister to the shoulder, from which, with some other topical applications, the patient found considerable relief.

But, as the pain continued more or less, particularly about the articulation of the clavicle with the acromion; the lady, (in whose service the patient was) desired the assistance of other medical practitioners. A dislocation of the *os humeri* being suspected, reduction was attempted by the usual means.

There was now a tumour, about the size of the head of a grown person, extending from the mastoideus muscle and clavicle to the bend of the arm. This tumour had increased rapidly since the attempt to reduce the supposed dislocation. It was tense, somewhat discoloured, and prominent at the superior part, the skin very thin; besides the inconvenience from its size, it gave him much uneasiness on the slightest pressure, but there was no perceptible pulsation.

About four inches below the articulation of the shoulder, I observed, that the tumour,

where it seemed to point, and appeared more soft and yielding than the rest, had been punctured, and was informed, about a tea-cup full of blood issued from the orifice, which immediately closed. At the more depending part, the veins were varicous, and formed an appearance like net-work on the surface.

He had a slight tickling cough, respiration rather difficult, appetite greatly impaired, tongue white and parched, with considerable thirst. In the day, his skin was generally hot and dry, but during the night, and especially towards the morning, he had profuse colliquative sweats, and continual pain, extending from the shoulder to the extremities of the fingers, with great irritability of the system. He had no sleep without a liberal use of opiates. The pulse, at the wrist of the arm affected, was small, often intermitting, and sometimes hardly perceptible. At the other wrist it was quick and hard, being generally from ninety-four to a hundred strokes in the minute.

In this lamentable condition I thought it incumbent upon me to request Mr. Nooth and Mr. White, surgeons to the Dispensary, and gentlemen for whose professional abilities I en-

ertained the highest respect, to meet me, in consultation, the next morning.

On carefully examining the tumour, and hearing the preceding account from the patient as well as from the servants, we considered it to be an aneurism, probably caused by the injury before mentioned; that the hurt he received in the first instance might have been the cause of the complaint, exasperated by the attempt at reducing a supposed luxation.

In this unhappy situation, extremely emaciated, and so weak as to be unable to stand, or even to bear being raised, we deemed it improper to remove our patient to the Dispensary.

The tumour continued increasing in size, and the integuments so much upon the stretch, that it was every moment expected they would have burst.

During the last month of his illness, this increase of the tumour was more rapid than at any former period. By taking its dimensions once in three or four days, we were enabled to ascertain, with precision, that it sometimes augmented from an inch to an inch and a half, in the space of a week or ten days. Hence its enormous magnitude may be easily conceived. For, on measuring it, a fortnight previously to his

death, its dimensions, from the adhesion to the muscular parts about the neck and shoulder, to the bend of the elbow, was three feet one inch and a half.—In the transverse direction; about four inches below the articulation of the shoulder, and under the axilla, which appeared to be the broadest base of the tumour, it measured three feet ten inches, and had much the resemblance of a cushion placed upon the arm.

Small quantities of blood frequently issued from the surface of the tumour, particularly near its superior part, till within a week of his death, when a large wash-hand-basin full was discharged at one time, but without any apparent diminution of its size, or affording the smallest alleviation to his sufferings.

All the symptoms continued, and the immense size of the tumour rendered it impossible for him to rest in any other position than on the right side. His extremities became edematous; and, after nearly five months of extreme torment, death, on the 20th of August, put a period to his miserable existence. Unfortunately, from circumstances which it is unnecessary to detail, an examination after death could not be procured.

In the perusal of medical writers, either

ancient or modern, I do not recollect having read of a tumour of a similar description. In the *Ephemerides Germanicæ*, we have a relation of a tumour of the lymphatic kind, upon a woman's arm, of vast magnitude; and Gooch, in his *Cases and Remarks in Surgery*, mentions one of the same species, also upon the arm of a woman, of a most enormous size.

☞ The above paper is inserted without any attempt to ascertain the exact nature of the disease, which, in many respects, seems to have approached nearer to the fungus hæmatodes of Mr. Hays, than any described tumor. If it was really aneurism, it is remarkable in exhibiting no pulsation at any period. If it was not, it may be useful to record so extraordinary an appearance, the nature of which may hereafter be explained by other analagous cases.

ART. XVIII.

A CASE OF HYDROPHOBIA, WITH THE APPEARANCES ON DISSECTION; TO WHICH ARE ADDED, SOME OBSERVATIONS ON THE PROPYLAXIS AND CURE OF THAT MALADY.

By THOMAS WALSHMAN, M.D.

Licentiate of the Royal College of Physicians, London; Senior Physician of the Surrey and Western Dispensaries, F.L.S. &c.

A DOG, belonging to a gentleman in the Borough, was taken ill about the 25th of October, 1814. Mr. Angers, a farrier and veterinary surgeon, was sent for, and declared the disease not to be hydrophobia. His apprentice, whose case is the subject of this paper, was sent with one of the men-servants to administer a bolus. While the man held the dog's jaws open, the boy was ordered to put the bolus down his throat, and before he had withdrawn his hand, the servant suffered the jaw to close so suddenly that one of the

boy's fingers was slightly wounded by the dog's teeth. No particular notice was taken of this accident, as the dog was pronounced not mad. The wound soon healed.

Robert Lake, the boy above alluded to, then fifteen years of age, and in good health, was, on Saturday, the 25th of February, 1815, attacked with a slight vertigo, and loss of appetite; he was rather dull, and could not sleep.

On Sunday, the 26th, all the symptoms were increased, and then he began to have an aversion to liquids.

On Monday, at ten o'clock at night, the symptoms of hydrophobia were complete, yet his intellect was not at all deranged. He gave a good description of all his present feelings, and related accurately the commencement and progress of the symptoms.

He said he had felt no pain in the bitten part prior to the attack upon the system, nor any since. The light of a candle threw him into great agitation; and touching any part of the body produced the same effect. The merely mentioning any thing to drink caused the most violent convulsive spasms of the whole frame. I desired him to swallow a little water:

he took the cup very cautiously into his right hand, and carried it as carefully to his mouth, but his head was drawn involuntarily towards the left shoulder; as soon, however, as he had got the cup parallel with his mouth, he forced the liquid into it, which was immediately followed by most violent convulsive spasms over his whole body. He occasionally sighed, and said he felt as if he should be suffocated. The sound of any one's voice in talking was very ungrateful to him.

He said he felt himself most comfortable when alone. He desired his hands to be tied lest he might hurt himself, or any one about him. Pulse full and strong;—fauces dry;—and the superior part of the œsophagus felt to him as if closed.

Remed.—*Mittantur è brachio sanguinis uncia duodecim.*

Capiat extract. opii gr. 1, 2^{da} quaque hora.

Tuesday, the 28th of February, one o'clock, p. m. and second day after the disease was completely formed.

Symptoms.—When he attempts to swallow, the convulsive spasms are the same as yesterday. *Pulse* now is very quick and weak; hands cold; no sleep all night, had a little

this morning; no stool. Has still the same aversion to light. He desires his head to be pressed upon, and held down on the pillow. This morning he desired to have some porter, a little of which he swallowed, but with the greatest difficulty; every attempt brought on the convulsive spasms. He feels the same sense of suffocation, accompanied with an occasional sigh. Sixteen ounces more of blood were taken from the arm, in the morning, before I saw him, and he was not faint. The opium was continued.

Mr. Phillips, an able surgeon in the Borough, who attended the whole of this case, told me, after I left the patient this day, that he was at times delirious, and that the convulsive spasms were very violent, with delirium.

He said, there was a vast secretion of saliva, which became very spumous from his incessant talking. At about ten o'clock at night, of the same day, the spasm all at once ceased; he became perfectly quiet, and died instantly, as if exhausted.

APPEARANCES ON DISSECTION.

The body was opened by Mr. Phillips and his assistants, Messrs. Palmer and Baker.

Cavity of the Abdomen. — All the viscera

of the abdomen were healthy. Stomach was a little contracted, and the rugæ on its internal surface were very large and strong. The upper orifice, or cardia, was a little more vascular than usual, but not inflamed; indeed, the increased vascularity was so inconsiderable, that one would have passed over it unnoticed, if the patient had died of any other complaint. The whole of the œsophagus, and the trachea, as far as its bifurcation, were cut open, (the tongue, pharynx, and larynx, being all completely taken out,) and there was not the least vestige of disease. The intestines were healthy. Gall-bladder moderately distended with bile, which was rather darker than usual. The spleen and pancreas healthy. Urinary bladder was much distended with urine.

Cavity of the Chest.—The heart was healthy; the left ventricle was distended with blood, the right was flaccid and empty. Pericardium natural, and no more *liquor pericardii* than is commonly observed. Lungs were healthy.

Cavity of the Cranium.—Its contents were perfectly healthy.

We also examined the œsophagus and stomach of the dog that bit the above patient,

and found them perfectly healthy; the rugæ of his stomach were very numerous and prominent, like the boy's.

On Friday, the 3d of March, 1815, Mr. Phillips desired me to examine the cavity of the abdomen of a dog that was shot, being supposed to be affected with hydrophobia, for he had bitten a young lady and the manservant.

The rugæ of the stomach of this dog were similar to the above-mentioned, but the organ was healthy, as well as all the rest of the abdominal viscera.

Visiting a patient some time ago, the gentleman told me, his stable-dog had been strongly affected; and the veterinary surgeon could not ascertain his complaint. I requested to see him, tied up as he was, and ordered a basin of water to be brought to him. His head was as it were involuntarily drawn from it on one side towards his shoulder, but no convulsive spasms ensued. This symptom appeared hydrophobic, and I desired them to shoot him immediately. On opening this dog, the rugæ of his stomach were numerous and prominent, similar to the dog's already mentioned; but the vascularity on the internal

surface of the stomach, and especially near the cardia, was much greater.

A very fine dog, a pointer, was apparently very ill, having been suddenly seized. The family, apprehensive of canine madness, desired me to see him. The muscles of his loins and lower extremities were in a paralysed state; so that, when he attempted to walk, he dragged them after him. A basin of water being brought to him, he just put his mouth to it, but his head was not involuntarily drawn from it. The dog lived about forty-eight hours after I saw him. On opening him, I found a quantity of nux vomica in his stomach. This fact is mentioned to enable us to form a proper diagnosis on any future occasion. I shall now return to the particular object of the paper.

It has fallen to my lot, in the course of many years practice, to see several cases of hydrophobia. In all of them, the symptoms were very similar to those of the patient above stated; and they have all terminated fatally. I have not been so minute in noticing every particular symptom of my patient, as the cases of Dr. Fothergill and others amply supply my defect.

The effects of this poison are now well known, and have been witnessed many years. It is suspected to arise spontaneously in dogs, and from them may be communicated, perhaps, to all other animals; we, therefore, consider it as an universal poison. But it can only be communicated from the rabid animal.

It has been a question, too, whether it can be communicated from man to man, under the influence of canine madness. One case I relate, as it goes to prove, that it cannot.

A gentleman, far advanced in years, was afflicted with hydrophobia; and, while he was in that state, desired to salute his daughter;—he seized her cheek with so much violence between his teeth, that we had much difficulty in disengaging her from him; and she did not wash off the saliva deposited in the wound.

I watched the history of this subject many years, and she never was afflicted with the disease. It is true, this is only a solitary case, and not sufficient to determine the question; but it seemed worth recording.

The interval between the insertion of the virus and the commencement of the hydrophobous symptoms is various. I have known it

to be six weeks, four months, and six months; several authors relate a still greater variety.

With regard to the treatment of this disease, when the constitution has participated in its effects, I can say but little; as I believe nothing yet done has succeeded. Bleeding, blistering, mercury, opiates, antispasmodics, warm and cold baths, have all been tried in the most vigorous way, and without success.

Two cases are related in the second volume of the Medical Transactions of the College of Physicians; one by Mr. Wrightson, in page 192. His patient, he informs us, was cured by the use of opium, musk, and cinnabar.

The other, by Mr. Falkener, page 222; is of a patient cured by copious bleeding and mercury, which salivated her.

The same plan, however, has been tried by others, without success. Such remedies, therefore, are not to be relied on with any certainty.

In order to direct us in the cure of any disease, we ought to be well acquainted with the action excited by it on the living system.

In this inquiry we can only reason negatively, in the present instance.

1st. The disorder does not appear to depend upon inflammation, at least we have not sufficient evidence to prove its existence; for, in many cases of inspection after death, there have been found no appearances of inflammation. Besides, we know that neither *cynanche tonsillaris*, nor *trachealis*, nor *pharyngea*, nor even *gastritis*, is accompanied with hydrophobous symptoms, with the same uniformity; and that, in *phrenitis*, or in the delirium of fever, or hydrocephalus, we never have any hydrophobous symptoms.

Dr. Cullen has classed this disease under the head of spasm; in my opinion, very properly; and he certainly has given a most excellent definition of it:—viz. “*Potionis cujuslibet, utpote convulsionem pharyngis dolentem cientis, fastidium et horror; plerumque e morsu animalis rabidi.*”

Dr. Cullen has made two species; the one, produced by the bite of a rabid animal; the other, arising, spontaneously, in the human species. And probably it is in this last species only that a cure was performed.

Boerhaave, and his commentator, Van Swieten, considered hydrophobia to be a convulsive

and spasmodic disease, but every now and then terminating in inflammation; the inflammation being only the effect of spasm, and not the cause.

However, Morgagni, whose accuracy is universally admitted, says, there is great redness in the pharynx, going on to a black state; but, most probably, this appearance is the effect of the spasm.

Mr. John Hunter, in his lecture on this disease, related the case of a boy who died of it, and, on inspecting the parts after death, he found no appearance of inflammation.

Seeing, then, that our treatment has failed, after the symptoms have occurred, the attention of practitioners has been directed to the *prophylaxis*; to effect this, a variety of remedies have been employed, but it is universally agreed, that, if the wounded part can be completely excised, the patient will be free from danger. If the wounded part could be destroyed by caustic, the patient might be equally safe. But excision is certainly most secure.

I have had several cases of persons bitten by dogs afflicted with hydrophobia, in which the part has been excised, not one of them has

been afflicted with this disease; and it is now many years since the operation was performed on some of them.

One remarkable instance was a child, the skin of whose arm was wounded, by the dog's teeth, in twenty places, for the dog got her down and there was a considerable struggle between them.—In this case, to have removed all the wounded places by the knife, would have been like flaying the arm, I, therefore, ordered the wounded parts to be touched with the concentrated sulphuric acid, which acted as an immediate caustic; the sloughs were thrown off by the operations of nature, and the ulcers healed. The child has remained well, and it is now some years since the accident took place.

But it is not unfrequent to consult the practitioner after the wound is healed; or the part wounded may be such as not to admit of excision.

When this is the case, what steps are we to take?

Mr. John Hunter was once of opinion that the virus is confined to the part till just previous to the hydrophobous symptoms; and, as a proof, he said, the part wounded always

became painful and inflamed, before the absorption of the virus into the system took place. But cases occurred to him after he had formed this opinion, not preceded by any local symptoms, and which, of course, obliged him to relinquish such an idea.

To state what has been done in these cases, by way of prevention, might be deemed unnecessary, as this must be known to every practitioner; such as sea-bathing, giving the Ormskirk medicine, &c.

With respect to the Ormskirk antidote, I can say nothing certain of its composition, but there is a recipe in the "Medical and Philosophical Commentaries, by a Society in Edinburgh," vol. V. page 49, copied from Dr. Heysham's "*Dissertatio Medica de Rabie Canina*," which is said to contain the articles composing that medicine.

The following composition, which Mr. Entwisle believed to be the same as the Ormskirk medicine, was administered with success, to a pack of hounds, many of which had been bitten by a rabid dog, viz. the leaves of rue and red sage, each 2 hands-ful; garlic, 4 ounces; powdered calcined oyster-shells, 5 ounces and a half; powdered arme-

nian bole, 2 ounces; London Theriaca, 4 ounces; strong ale, 4 pounds.

The above ingredients are to be boiled gently, to the strained liquor 2 pints.*

Of this strained liquor he gave 5 large table-spoonsful to an adult human subject, 3 to a dog, and 8 or 9 to a horse or cow.

A Mr. Chew, who studied, and, afterwards, practised, medicine, said he had administered the same composition as Mr. Entwisle's, with the greatest success;—that he had kept a register of the cases, and he hardly knew an instance where it had failed; that he had even given it, with success, to dogs where the symptoms of *rabies canina* were thought to be coming on.

In some instances, where there is really no danger, it may be necessary to administer something under the name of a prophylactic, to quiet the mind of a patient under an imaginary fear of this horrid disease. The late Mr. Hunter, when lecturing on this malady, used to relate a very curious instance of this imaginary madness.

* The liquor is to be strained through such a sieve as the powder will pass through, for the powder is to be given in the strained liquor.

To sum up the whole, we may observe,—

That the disease may sometimes arise spontaneously in dogs; but, for the most part, is communicated by the bite of another rabid animal:

That, in all the histories of the symptoms of this disease, there is a great similarity.

The interval between the insertion of the *virus*, and the hydrophobous symptoms, is various and, we may add, uncertain.

With respect to its duration:—after the system is affected it generally terminates on or before the fifth day.

The only certain prophylactic is either completely dissecting out the wounded part, or destroying it by caustic; but the first mode is the best. If the caustic be used, I should give the preference to the concentrated sulphuric acid, and this should be done, if possible, immediately after the wound is inflicted.

If we were satisfied that the disease was spasmodic, and that all the pain and violent actions arose from the sentient principle being in a high degree of excitement; then every possible stimulus should be abstracted. The patient should be confined in a dark room,—there should be few persons in it, and the greatest

quiet preserved,—he should abstain from all liquids,—and the nourishment given should be in a pulpy form.

As a remedy, I would recommend *extract. hyosciami*, in as large doses as the patient could bear; this being a remedy which I believe has never yet been tried in such cases.

ART. XVIII.

CASES OF GOUT, CURED BY ELATERIUM.

By J. GREEN, Esq. Surgeon.

Read, October 1815.

ON the 29th of December last, I was desired to visit A. C. Esq. a hearty man turned of sixty. I found him sitting in his parlour, with his left leg on a pillow. He complained of extreme pain in the foot and ankle, which were so much inflamed, that he could not bear the slightest touch; he had passed the preceding night in torment: his pulse was full, and about ninety-six. In the evening, he took the following medicine:—

℞ Inf. sennæ. ℥iiss. Tin. sen. Syr. rosæ ana
ʒ i. Elaterii $\frac{1}{3}$ partem unius grani. Tin. opii
gr. x. Tin. digitalis gr. iv. M. F. H.

Went to bed, but continued restless, and in much pain, without any sleep. About three o'clock in the morning, he felt sickness

at the stomach, and had a very copious alvine discharge; in the following two hours, three more stools, the latter, as he expressed it, passed away like scalding water. He then had three hours very comfortable sleep; after which, he took a second draught, and by ten o'clock found himself so much better as to get up and walk down stairs, with a very little limping,—whereas, the getting up stairs the preceding night was a task of great labour and pain. In the course of this day, he walked about his room. The second draught made him sick, and procured several loose motions. On the third day, he was quite well, and went out, — walking without the smallest inconvenience.

On the 9th of January, he went out in the evening without a great coat, and made a visit more than a mile from home;—it was a very severe frost with a keen cutting wind, and, in returning, he felt the gout coming in his right knee and foot. Its progress was so rapid that he had great difficulty in getting home, and up stairs to bed: he passed a very unquiet night, and the whole of the next day continued unwell. The subsequent night was passed in a still worse state. On the

morning of the eleventh, I found him in bed on his back, incapable of moving, and in excruciating pain in his knee. He solicited very earnestly for the same medicine as before. The first draught made him very sick. He threw up a large quantity of bile, and had several loose motions. At night, he repeated the medicine with the same effect, and several scalding stools. This process rendered purging the first part of the night extremely uncomfortable; but, about five o'clock, he fell into a dose,—had four hours very good sleep, and awaked much refreshed. In the morning, (12th) before I visited him, he took a third draught, which kept up the discharge through the bowels. I saw him between eleven and twelve, and, to my astonishment, I found him down stairs, and walking about his parlour,—the pain and gout nearly gone from the knee. In the course of the day, he walked about his grounds. The evacuations of the preceding evening had made him very faint; and, without any other monitor than his own feelings, he had taken two glasses of old hock. He took no more medicine, and remains quite well.

Whether the Elaterium and opium be the basis

of the eau medicinale, I am not prepared to say ; but am convinced, not only from this case, but many others, that purging and vomiting are (generally speaking) serviceable in gout ; and my experience convinces me, that heating medicines, and enveloping the parts in flannels and fleecy hosiery, does harm. It has been my practice, for many years, to throw them aside, and where there is much inflammation to apply leeches.

I have never found any evil upon following the antiphlogistic plan, and could relate many cases in support of this opinion ; but I will content myself with noting one which has occurred since the preceding, and which, to my mind, incontestably points out the good effects of purging in such cases.

Mr. S. about sixty years of age, accustomed, for some years, to gout, which generally attacks him in the spring, and commonly confines him to the house between three and four months, was seized with gout, in both feet, about the middle of January last, incapable of standing, and confined to his bed. In this state, I saw him on the second day of his illness, and prescribed the foregoing medicine ; he took three draughts at proper intervals,

which vomited and purged him pretty smartly;—at the end of two days he was down stairs, the gout quite gone from one foot, and nearly from the other. He walks about with one crutch. I need scarcely add, that he is much pleased, having previously made up his mind to three months pain and confinement:—whereas, he is now free from gout, and nothing but debility remains, which I have no doubt a little time will remove. He is now taking a little draught, sometimes once and sometimes twice in the day, composed of equal parts of compound infusion of gentian and infusion of sennæ, with a view of strengthening the stomach and promoting the discharge of colluvies from the bowels.

ART. XIX.

CASES OF FATAL OBSTRUCTION OF THE BOWELS,
WITH APPEARANCES ON DISSECTION.

By G. DAMANT, Esq. Surgeon, F. M. S.

Read, February 21, 1814.

JOHN MORRIS, aged fifty, has been afflicted with temporary obstructions of the bowels, during the last twenty years. They were frequently attended with stercoraceous vomiting, which continued for about twenty-four hours, when the patient was relieved by a natural evacuation by stool. In the last attack, the vomiting continued four days, previous to his calling in medical aid. On examination, the abdomen was found greatly distended, but the pain was not more than might be expected from such distension.

The quantity of apparently feculent matter vomited up was immense, not less than from

twelve to fourteen pints per day; the quantity of aliment taken was not more than a pint and a half. His thirst was not great, nor was his pulse very quick; but, from his general appearance, a physician, who was consulted, pronounced him in such imminent danger, that he did not expect to see him alive next morning. He directed a simple enema and a grain of calomel, with five grains of jalap, every hour, till next day. No effect was produced, vomiting continued, and the patient remained much in the same state. The enema would not remain in the rectum. I endeavoured to pass a large bougie, but could not effect it. One drachm of sulphat of magnesia was then ordered every two hours till the next day, and afterwards tobacco injections, (one drachm to a pint). After throwing up two or three of these injections, I was enabled to pass a bougie a little higher. I afterwards gave trial to the tobacco smoke, for at least three quarters of an hour, but it had not the usual effect of producing syncope. The last resource was a tea-spoonful of castor oil every hour, which was persevered in till nine ounces were taken, when the patient expired, being the eleventh day of the

disease. He had expressed a particular desire that his body might be opened after death, a request eagerly complied with. Soliciting the assistance of my neighbour and friend, Mr. Andree, we proceeded to ascertain the nature of the disease, and cause of death.

The small intestines were distended to an unusual size, bearing strong marks of inflammation. The *valvula coli* was perfect, and no obstructions could be detected till we examined the colon, which was evidently contracted, from its beginning to the termination of the rectum; it was also filled with a whitish substance, very much resembling paste made of gum tragacanth, and so tenacious as with difficulty to admit the finger to be passed down,—indeed, water would not find a passage, either before or after death. Previous to death, I made repeated trials with the largest pewter syringe I could obtain.

This slight history of the disease is offered, that if any mode of treatment may suggest itself as likely to relieve in similar cases, its publicity may be the means of saving the lives of many of our fellow-creatures:—I say *many*, for, in the course of ten years practice, I have met with three cases bearing the

same marks of disease, and several where the symptoms were similar; but, unfortunately, I had not an opportunity of opening the bodies.

Additional Remarks by the President.

Since the above was read, the following case occurred to the president of this society:—

A. B. aged sixty, had been, for several years, troubled with extreme costiveness, to relieve which she was in the habit of continually taking purgative remedies. From some cause, she had suffered herself to remain more than a week without evacuations, after which the usual remedy failed, and her medical attendant was applied to. Finding considerable pain and some sickness, though neither these symptoms nor the pulse indicated high inflammation, he very prudently took about eight ounces of blood, and directed some purgative remedies. The following day I saw her, and, finding the cramentum slightly covered with coagulated lymph, and the other symptoms continuing without any relief, directed a larger quantity of blood to be taken. This had a healthy appearance. Various remedies were tried by the mouth and by clyster.

There was much difficulty in passing the latter. A candle, used as a suppository, was, in a few hours, reduced to little more than the wick. Some liquid fæces were at last voided, but the sickness and other distressing symptoms rather increased, till the patient vomited only feculent matter. The tension of the abdomen was now very considerable, and death took place on the fourth day after I saw her. Permission being obtained to open the body, the following is an account of the appearances taken by Mr. Sherman, an ingenious young surgeon, who very kindly made the examination in my presence.

“The abdomen was exceedingly enlarged and much elevated, so as to give the appearance of a steatomatous tumour. On making the first incision, the adipose substance was found extremely thick and hard; and when the peritoneum was punctured, a quantity of very offensive air rushed out. Marks of active inflammation were found in the whole course of the intestines, especially in the jejunum, which had proceeded almost to a state of gangrene. Both large and small intestines were distended with air and feculent matter; the colon was found greatly enlarged, and full

of fæces. But the chief morbid appearance was a stricture in the rectum, about four inches from the anus, which so completely shut up the canal, that not even fluid matter could pass. Adhesions were found between the right lobe of the liver and the peritoneum. The liver appeared rather small; the other viscera were sound. Adipose substance was found, in a large quantity, in various parts of the body."

There is no doubt, as the author of the above paper remarks, that these diseases are more common than is usually suspected; and, if the stricture or adhesion is high up, there is reason to fear the remedy will be beyond our reach. In the present case, had the whole been perfectly understood during life, an operation might have been justifiable, though, from the age and exhausted state of the subject before she applied for relief, the issue must have been very uncertain.

On all these accounts, it is of the highest importance, as far as possible to ascertain the causes of such complaints, that they may, in any instance, be prevented, by a proper attention on the part of the patient. I shall, therefore, take the liberty of suggesting one probable cause.

Most people are in the habit of evacuating the bowels at one certain hour of the day; if any accident prevents it, the disposition will, after a certain age, cease till the same hour in the following day. The delicacy of the English, and particularly of females, is well known, and often subjects them to this inconvenience. May not the lodgment of feculent matter, retained sometimes by the muscular action of the sphincter, and sometimes, perhaps, by the contraction, voluntary or involuntary, of some part of the intestinal canal, induce a permanent contraction, either by the effusion of coagulated lymph, or by a mere irregularity in the peristaltic motion.

The following case seems to justify such an opinion :—

About the year 1796, General E. returned from the West Indies, a passenger on board a vessel in his majesty's service. The number of fellow passengers was so considerable as to render the accommodations for those of the cabin very irksome to a delicate man,—and, for several days, the General found no convenient opportunity of relieving himself. From this time, he suffered from long costiveness; and, when I saw him, though his appetite

was good, and even nice, yet he had no evacuations but by the œsophagus. In this condition, he continued for some time, but was, at length, relieved; probably, however, only, by liquid stools. He died, after a return of the complaint, at a distance from me; but I was afterwards informed, that a stricture had been discovered very high in the intestines.

ART. XX.

EFFECTS OF DIET IN STOMACH DISORDERS.

Read May 21st, 1804.

To the President of the Medical Society of London.

Sir,

IF the following cases should appear to you to deserve the attention of the Medical Society, you will oblige me by laying them before the learned members. Though the diseases are not new, yet the success which attended the mode of treatment would seem to shew how much may be done by a mere attention to diet.

I am, Sir,

Your very obedient servant,
JOHN P. DALE.

Liverpool, Nov. 17, 1800.

CASE I.

Some time about the middle of November, 1797, I was desired to call upon Mrs. W.

aged thirty-six. She told me, that she had laboured under a very severe complaint. at her stomach for many years, for which she had consulted several medical gentlemen, both in this town and Manchester, and had experienced temporary relief. The following is the history of her case, nearly in her own words :—

When about eighteen years of age, as she was walking in the street, she, in an instant, felt, as if something very heavy had fallen into the stomach. Immediately there followed severe pain, which did not give way to any of the usual means. Her parents, alarmed at this, sent for their surgeon, who was equally unsuccessful in procuring relief. The family physician was then consulted, who, after trying various medicines, which procured little more than momentary ease, gave it, as his opinion, that it was a rheumatic complaint, and advised her to go to Buxton. After bathing and drinking the water for three weeks, or a month, she found herself considerably relieved, and returned home. From this time, she usually had an attack of the pain in her stomach once in six weeks, or two months, which continued from two weeks to four or five, with little interruption or ease. The

only thing that seemed to give the least relief was the cold bath, which she occasionally used when the pain was present. She continued in this uncertain state of health till her marriage with Mr. W. In about a year after, she became pregnant; from this period, she was free from her distressing complaints for about two years; at which time, her mind became very anxious upon some points of considerable importance to herself,—and the consequence was the return of the old complaint, with more than its former violence. In this state she continued, tired of taking medicines from the faculty, or nostrums which her friends had recommended. The pain was always increased after eating, and almost every thing she took turned sour on her stomach. She frequently vomited bilious matter; and, in short, had every symptom of complete dyspepsia. I should not forget to observe, that she usually had an attack of the complaint, if, at any time, her mind became anxious or disturbed; the first intimation of which was flatulency, and acidity in the stomach. Upon considering her situation, I thought it highly probable, that this disease might be cured, by prevailing with her to take such

food as with difficulty passes into a state of acetous fermentation; and recommended animal food, with but a small quantity of hard biscuit and water. She was ready to try the animal food and water only, if I thought proper. Examining the urine which she had made the night before, I found it had a musty smell, and was of a light straw colour,—of this she usually made a large quantity—say, from five to six pints in twenty-four hours, when the complaint was present. I kept eight or ten ounces of this urine in a glass; and, after it had stood upwards of a week, it had so little the smell of stale urine, or ammoniac, that I should not have supposed it had been made an hour. The day after she began with the animal food and water, she had received great relief, and became every hour better, so that, at the end of three days, she said she felt herself better than she had been for three years. She continued the diet, without any vegetables whatever, for fifteen days. The only medicine she took was a little hydro-sulphuret of ammonia, and once or twice an aloetic pill with ammonia preparata, to keep the bowels open.

On the sixteenth day, she was compelled

to desist from taking animal food, and live upon milk only, as she had become sick, and had also a lax, both of which disappeared the following day. From that time, she has constantly eaten a very small proportion of vegetables with her animal food, and has continued perfectly well, except, at any time, she should forget herself, or neglect her precautions, of which the return of the symptom soon reminds her. As the stomach recovered its healthy action, (if I may be allowed the expression,) her urine became somewhat less in quantity, and of a natural colour and odour.

CASE II.

In March, 1798, I was desired to see Mrs. B. a lady whom I had attended on all occasions of illness, from the time she married Mr. B. and settled in Liverpool. She was about thirty-nine years of age, had had four children, and her state of health was, in general, pretty good, her habit was spare, and her strength not great, but she was active and temperate. At my first visit she told me, that she had been seized with a very sharp pain at the neck of the bladder and across the loins, that she parted with her urine in small

quantities, and very often. In answer to my inquiry, whether she had ever passed any red sand or small sharp gravel;—she answered in the negative, but that her water was high coloured; that she had laboured under this disease, from time to time, for more than nine years; that she had made use of various medicines, without much benefit; that, in the first stage of her complaint, and some years before her marriage, she had tried the alkaline mephitic water for some time, but with little good effect; and that, despairing of permanent relief, she had till now ceased to make her complaints known. Her pulse was natural, but she looked thin and very sallow, her eyes were red, and had a peculiar wildness in them; her mind was, at all times, very active, but now extremely irritable; she was out of bed, but seemed very restless, moving about upon the chair she sat on, and frequently going to another. She never had felt any sickness at the stomach.

In the obscurity of such a case, I contented myself with directing a large emollient enema immediately, (her habit inclining to costiveness,) and, after it had operated, an anodyne. She was desired to live upon light food, and drink

as much milk as she pleased, mixed with two parts of barley water. Two days after, I found her in bed; and, on entering the room, was struck with a very disagreeable smell of highly pungent urine, which she had just made, nearly the colour of strong coffee, but the odour from it pungent beyond any thing I had ever experienced, highly resembling caustic volatile alkali.

Such she told me had been the case during her whole illness. As I sat by her, I thought it might be possible that her complaints might have been brought on by taking too much animal food in proportion to vegetable matter; and, on inquiry, found, from an inclination which had increased on her, and which she had indulged, her diet consisted almost entirely of animal food. I advised her not to eat any; suspecting that, without such a restraint, the disorder would not entirely leave her, though she might be better than she was. She promised to comply immediately. After this, I did not see her for four days, but then found her much better; taking a little animal food at dinner. I urged my former opinion, requesting her restraining herself for a week. She said that if her life depended upon it she feared she

could not ; however, she would try, as she had already found so much benefit from the plan. I sent her some nitric acid mixed with water, to take as drink, and saw her again in about a week ; she was wonderfully better, but still had some remains of her pains : she now walked out in the yard, and gained strength daily. She told me she had taken scarcely any butcher's meat, and some days only a little fish, but that she could not exist totally without animal food. I was certain that the total abstraction of substances, containing ammoniac, would cure her completely. About this time she was urged to consult a physician, who treated her complaint as gravel. She now began to eat more animal food, and before the end of a week, became almost as ill as ever. She, therefore, returned to her vegetable diet ; in a few months her health became perfectly good ; but even now, if she indulges her desire for flesh meat, she always feels a little return of the old uneasiness, which constantly goes off upon taking more vegetables. I forgot to say, that I examined her urine from time to time, which gradually became natural ; and I could, by its state, always discover if she had indulged her desire for animal food.

ART. XXI.

COMPARATIVE RETURN OF SICK OF THE ARMY
SERVING IN THE WINDWARD AND LEEWARD
ISLANDS AND COLONIES, FROM 1803 TO 1814,
INCLUSIVE.

By ROBERT JACKSON, M.D.

Physician to the Forces and Inspector of Hospitals for the Leeward Islands.

London, December 25th, 1815.

Sir,

IF you think the enclosed return of mortality among the troops in the West Indies, Windward and Leeward island station from the year 1803 to 1814, inclusive, of sufficient importance to make an article in the *Memoirs of the Medical Society, in Bolt-court*, you are at liberty to give it for publication. It is official and authentic. The treatment of febrile diseases varied considerably within the period of the return alluded to; but I cannot, at

present, give a full detail of it. At one time, and with one set of men, direct stimulation by brandy, wine, and opium, and nourishing diet, constituted the basis of the practice; cold effusion, according to the view of Dr. Currie, also had its day of fashion. It was succeeded by purgatives, as recommended by Dr. Hamilton; but the exhibition of mercury, (calomel internally and mercurial ointment by friction) in expectation of exciting salivation, which was considered as a cure, has been throughout the most prevailing of the routines. Whatever practice may have been followed, a comparative view of the returns, from 1803 to 1811, inclusive, shews, that the results are not very different; in so far, at least, as can be supposed to depend upon treatment. From 1812 to 1814, inclusive, the view of practice, more particularly at Barbadoes, was directed by a different principle, viz. by arresting the diseased action forcibly; and, where that was effected, by stimulating strongly to a train of action analogous with that of health. The subtraction of blood was the principal of the means employed with a view to effect the arrest; and the purpose was not attained, in many cases, by a less quantity

than six pounds at one bleeding. The effusion of cold water on the head and shoulders, emetics, blisters to various parts of the body, stimulating purgatives, with diaphoretics, and frictions of the skin with warm oil, were among the stimulating means employed to excite the counteraction, and to maintain its course. It is worthy of remark, that no instance of dropsy occurred in the hospitals at Barbadoes among persons who had been treated as here described; that nine out of ten were returned to duty in perfect health, within the fourteenth day; that there were few instances of imperfect cure, or visceral congestion; and that full diet and large allowances of wine, as appears by the table annexed to the return, were not productive of benefit.

I have the honour to be,

Sir,

Your most obedient servant,

ROBERT JACKSON, M. D.

*To the President of the Medical
Society, Bolt-Court.*

Comparative Return of the Sick of the Army serving in the Windward and Leeward Islands and Colonies, from 1803 to 1814, inclusive.

1803.

Stations.	Admitted.		Discharged.		Died.		Annual Proportion of Deaths to the Number discharged.		Annual Proportion of Deaths to the Number of Troops.		Average Proportion of Wine, per Man, per Diem.		Average Proportion of Porter, per Man, per Diem.		Average Daily Expense, per Patient.				
	White.	Black.	White.	Black.	White.	Black.	White.	Black.	White.	Black.	Gills.	Gills.	s.	d.	s.	d.			
Barbados . . .	3405	872	3364	863	174	26	1	19 $\frac{1}{3}$	1	33 $\frac{1}{5}$	1	9 $\frac{1}{2}$	1	30 $\frac{2}{13}$	1	27 $\frac{8}{8}$	1	4	3 $\frac{1}{2}$
Dominica . . .	782	376	619	361	87	13	1	7 $\frac{1}{6}$	1	27 $\frac{3}{4}$	1	6 $\frac{2}{3}$	1	41 $\frac{5}{13}$	1	—	1	—	—
St. Vincent . .	544	346	473	353	68	23	1	7	1	15 $\frac{1}{3}$	1	6 $\frac{5}{7}$	1	16 $\frac{3}{4}$	1	—	1	—	—
Grenada	393	252	373	256	49	11	1	7 $\frac{3}{4}$	1	23 $\frac{1}{3}$	1	9 $\frac{1}{7}$	1	25 $\frac{9}{11}$	1	—	1	—	—
Antigua	459	88	452	91	17	2	1	26 $\frac{1}{2}$	1	45 $\frac{1}{2}$	1	28 $\frac{1}{17}$	1	101 $\frac{1}{2}$	1	—	1	—	—
St. Kitts	311	—	308	—	27	—	1	11 $\frac{1}{2}$	1	—	1	16 $\frac{1}{9}$	1	—	1	—	1	—	—
Trinidad	2051	972	1834	995	190	28	1	9 $\frac{2}{3}$	1	35 $\frac{1}{2}$	1	5 $\frac{3}{3}$	1	28 $\frac{5}{28}$	1	—	1	—	—
St. Lucia	968	65	694	61	165	2	1	4 $\frac{1}{3}$	1	30 $\frac{1}{2}$	1	5 $\frac{1}{3}$	1	138 $\frac{1}{2}$	1	—	1	—	—
Tobago	761	194	701	169	22	2	1	32	1	84 $\frac{1}{2}$	1	22	1	146 $\frac{1}{2}$	1	—	1	—	—
Demerara, &c.	252	70	157	67	8	3	1	19 $\frac{7}{8}$	1	22 $\frac{1}{3}$	1	119 $\frac{3}{4}$	1	88 $\frac{1}{3}$	1	—	1	—	—
	9926	3235	8975	3216	807	110	1	11 $\frac{1}{8}$	1	29 $\frac{1}{5}$	1	9 $\frac{1}{5}$	1	34 $\frac{7}{11}$	1	—	1	—	—

1804.

Barbados . . .	4610	615	4087	560	408	44	1	to	10	1	to	12 $\frac{3}{4}$	1	to	4 $\frac{1}{4}$	1	to	13 $\frac{2}{3}$	1	to	3 $\frac{5}{12}$	1	to	4 $\frac{1}{2}$	
Dominica . . .	1392	392	1172	361	367	13	1	—	3 $\frac{1}{2}$	1	to near	28	1	to	2	1	to	43 $\frac{1}{2}$	1	to	—	1	to	4	
St. Vincent . . .	466	75	444	95	23	6	1	—	17 $\frac{3}{4}$	1	—	16	1	—	14	1	to	35 $\frac{1}{6}$	1	to	—	1	to	—	
Grenada . . .	409	103	409	101	16	8	1	—	25 $\frac{2}{5}$	1	—	12 $\frac{5}{8}$	1	to	21 $\frac{1}{4}$	1	to	17 $\frac{1}{8}$	1	to	—	1	to	—	
Antigua . . .	1241	115	997	104	159	3	1	—	6 $\frac{2}{3}$	1	—	34 $\frac{2}{3}$	1	—	3 $\frac{4}{7}$	1	—	46 $\frac{2}{3}$	1	to	—	1	to	—	
St. Kitts . . .	354	—	322	—	11	—	1	—	28 $\frac{6}{11}$	1	—	—	1	—	28	1	—	—	—	1	to	—	1	to	—
Trinidad . . .	1726	508	1716	476	68	36	1	—	25 $\frac{4}{17}$	1	—	13 $\frac{2}{9}$	1	—	12 $\frac{1}{4}$	1	to	22 $\frac{1}{3}$	1	to	—	1	to	—	
St. Lucia . . .	1547	547	1405	514	249	16	1	—	5 $\frac{5}{8}$	1	—	32 $\frac{1}{8}$	1	—	2 $\frac{6}{8}$	1	to	22 $\frac{7}{16}$	1	to	—	1	to	—	
Tobago . . .	1383	410	1301	411	69	9	1	—	19	1	—	45 $\frac{9}{9}$	1	—	6 $\frac{1}{3}$	1	to	22	1	to	—	1	to	—	
Demerara, &c.	567	169	560	172	44	9	1	—	12 $\frac{8}{11}$	1	—	19 $\frac{1}{9}$	1	—	19 $\frac{1}{3}$	1	to	32	1	to	—	1	to	—	
Surinam . . .	1960	380	1606	333	144	11	1	—	11 $\frac{1}{7}$	1	—	30 $\frac{3}{11}$	1	—	8 $\frac{1}{7}$	1	to	44 $\frac{2}{11}$	1	to	—	1	to	—	
	15655	3314	14019	3127	1560	155	1	to near	9	1	to	20 $\frac{1}{5}$	1	to	5 $\frac{1}{3}$	1	to	25 $\frac{1}{3}$	1	to	—	1	to	—	

1805.

	White.	Black.	White.	Black.	White.	Black.	White.	Black.	White.	Black.	White.	Black.	In General Hospital.		
													Gills.	Gills. s.	d.
Barbados . . .	3556	1241	3439	1162	369	88	1 to 9 $\frac{1}{2}$	1 to 14	1 to near 4	1 to near 9	2	K.	1 $\frac{1}{3}$	3	11 $\frac{1}{4}$
Dominica . . .	1088	682	1057	628	68	48	1 to 15 $\frac{1}{2}$	1 to 13 $\frac{1}{4}$	1 to 8 $\frac{1}{7}$	1 to 16 $\frac{1}{4}$	—	—	—	—	—
St. Vincent . .	803	155	765	131	79	17	1 to 9 $\frac{1}{2}$	1 to 7 $\frac{1}{7}$	1 to 6 $\frac{1}{3}$	1 to 8 $\frac{3}{17}$	—	—	—	—	—
Grenada . . .	900	123	828	79	50	29	1 to 16 $\frac{1}{2}$	1 to 3 $\frac{3}{7}$	1 to 12 $\frac{2}{3}$	1 to 3 $\frac{2}{11}$	—	—	—	—	—
Antigua . . .	2542	57	2198	73	341	2	1 to 6 $\frac{1}{2}$	1 to 36 $\frac{1}{2}$	1 to 3 $\frac{1}{4}$	1 to 89 $\frac{1}{2}$	—	—	—	—	—
St. Kitts . . .	546	4	477	4	44	—	1 to 10 $\frac{2}{4}$	none to 4	1 to near 7	none to 2	—	—	—	—	—
Trinidad . . .	983	551	972	581	48	11	1 to 20 $\frac{1}{4}$	1 to near 53	1 to 16	1 to 49 $\frac{7}{11}$	—	—	—	—	—
St. Lucia . . .	1827	510	1520	499	255	22	1 to near 6	1 to 21	1 to 3 $\frac{1}{9}$	1 to 17 $\frac{1}{3}$	—	—	—	—	—
Tobago . . .	1004	207	801	201	115	4	1 to 7	1 to 50	1 to 3 $\frac{1}{4}$	1 to 45 $\frac{3}{4}$	—	—	—	—	—
Demerara, &c.	1084	383	857	338	183	13	1 to 4 $\frac{3}{4}$	1 to 26	1 to 4 $\frac{5}{7}$	1 to 33 $\frac{1}{4}$	—	—	—	—	—
Surinam . . .	1849	453	1802	379	93	15	1 to near 19	1 to 25 $\frac{4}{15}$	1 to 13 $\frac{3}{4}$	1 to 35 $\frac{9}{15}$	—	—	—	—	—
	16182	4316	14716	4075	1649	244	1 to near 9	1 to near 17	1 to 5 $\frac{1}{6}$	1 to 16 $\frac{1}{2}$	1	—	—	—	—

1806.

Barbados . . .	2693	1827	2484	1683	80	49	1	to	31 $\frac{1}{2}$ ⁰	1	to	34 $\frac{1}{3}$	1	to	17 $\frac{1}{2}$ ⁰	1	to	near	23	1 $\frac{5}{6}$	3	7 $\frac{1}{2}$
Dominica . . .	1056	1140	1991	1082	79	33	1	—	25 $\frac{1}{2}$	1	—	32 $\frac{1}{2}$	1	to	near	7	1	to	27 $\frac{1}{8}$	—	—	—
St. Vincent . .	926	203	1006	173	110	7	1	—	9 $\frac{1}{4}$	1	—	24 $\frac{3}{4}$	1	to	5	1	to	25 $\frac{3}{7}$	—	—	—	—
Grenada	639	124	521	116	48	13	1	to	near	11	1	to	near	9	—	14 $\frac{1}{6}$	1	to	15	—	—	—
Antigua	1556	149	1574	126	96	21	1	to	16 $\frac{1}{3}$	1	to	6	1	—	9 $\frac{1}{9}$	1	to	12 $\frac{1}{3}$	—	—	—	—
St. Kitts	781	3	705	5	12	—	1	to	near	59	none	to	5	—	34 $\frac{5}{12}$	1	to	—	—	—	—	—
Trinidad	1265	1153	1232	988	62	75	1	to	19 $\frac{7}{8}$	1	to	13 $\frac{1}{6}$	1	to	near	13	1	to	12 $\frac{3}{4}$	—	—	—
St. Lucia . . .	1214	387	1095	365	152	28	1	—	7 $\frac{1}{2}$	1	—	13 $\frac{1}{8}$	1	to	4	1	to	18 $\frac{1}{4}$	—	—	—	—
Tobago	276	58	287	54	13	5	1	to	near	11	1	to	near	11	—	16	1	to	21 $\frac{2}{3}$	—	—	—
Demerara, &c.	1735	283	1773	289	75	5	1	to	23 $\frac{3}{4}$	1	to	57 $\frac{4}{5}$	1	to	10	1	to	84 $\frac{2}{5}$	—	—	—	—
Surinam	2909	482	1895	488	178	19	1	—	10 $\frac{2}{3}$	1	—	23 $\frac{3}{4}$	1	—	7	1	to	near	34	—	—	—
	11150	5399	14563	5369	905	255	1	to	16 $\frac{1}{11}$	1	to	21 $\frac{1}{10}$	1	to	near	9	1	to	21 $\frac{7}{8}$	—	—	—

1807.

	White.		Black.		White.		Black.		White.		Black.		White.		Black.		Black.		In General Hospital.		
																			Gills.	Gills, s.	d.
Barbados . . .	5440	1639	5143	1684	346	99	1 to near 15	1 to 17	1 to near 15	1 to near 17	1 to near 15	1 to 17	1 to near 15	1 to near 17	1 to near 15	1 to 17	1 to near 15	1 to near 17			
Dominica . . .	1039	1493	1006	1367	60	106	1 to 16 $\frac{3}{4}$	1 to near 13	1 to 16 $\frac{3}{4}$	1 to near 13	1 to 16 $\frac{3}{4}$	1 to near 13	1 to 16 $\frac{3}{4}$	1 to near 13	1 to 16 $\frac{3}{4}$	1 to near 13	1 to 16 $\frac{3}{4}$				
St. Vincent . .	802	105	764	113	58	2	—	1 to 56	—	1 to 56	—	1 to 56	—	1 to 56	—	1 to 56	—				
Antigua . . .	935	436	865	411	50	23	—	1 to near 18	—	1 to near 18	—	1 to near 18	—	1 to near 18	—	1 to near 18	—				
Tobago . . .	308	17	282	15	24	5	1 to near 12	1 to 3	1 to near 12	1 to 3	1 to near 12	1 to 3	1 to near 12	1 to 3	1 to near 12	1 to 3	1 to near 12				
Grenada . . .	842	166	840	163	42	17	1 to 20	1 to 10 $\frac{1}{17}$	1 to 20	1 to 10 $\frac{1}{17}$	1 to 20	1 to 10 $\frac{1}{17}$	1 to 20	1 to 10 $\frac{1}{17}$	1 to 20	1 to 10 $\frac{1}{17}$	1 to 20				
St. Kitts . . .	883	1	844	1	24	—	—	—	—	—	—	—	—	—	—	—	—				
St. Lucia . . .	1662	301	1594	301	73	8	—	1 to 37 $\frac{5}{8}$	1 to 37 $\frac{5}{8}$	1 to 37 $\frac{5}{8}$	1 to 37 $\frac{5}{8}$	1 to 37 $\frac{5}{8}$	1 to 37 $\frac{5}{8}$	1 to 37 $\frac{5}{8}$	1 to 37 $\frac{5}{8}$	1 to 37 $\frac{5}{8}$	1 to 37 $\frac{5}{8}$				
Trinidad . . .	1395	1017	1313	996	90	82	—	1 to 12	1 to 12	1 to 12	1 to 12	1 to 12	1 to 12	1 to 12	1 to 12	1 to 12	1 to 12				
Demerara, &c.	1700	271	1639	258	20	11	1 to near 82	—	1 to near 82	—	1 to near 82	—	1 to near 82	—	1 to near 82	—	1 to near 82				
Surinam . . .	1565	333	1495	330	84	8	1 to 18	—	1 to 18	—	1 to 18	—	1 to 18	—	1 to 18	—	1 to 18				
	16571	5779	15785	5639	871	361	1 to near 17	1 to 15 $\frac{3}{4}$	1 to near 17	1 to 15 $\frac{3}{4}$	1 to near 17	1 to 15 $\frac{3}{4}$	1 to near 17	1 to 15 $\frac{3}{4}$	1 to near 17	1 to 15 $\frac{3}{4}$	1 to near 17	1 to 17 $\frac{1}{4}$			

1809.

	White.	Black.	White.	Black.	White.	Black.	White.	Black.	White.	Black.	White.	Black.	In General Hospital.		
													Gills.	Gills. s.	d.
Martinique . . .	7132	1108	6973	1038	725	64	1 to 9 $\frac{1}{2}$	1 to 16 $\frac{1}{4}$	1 to 4 $\frac{3}{4}$	1 to 23 $\frac{1}{2}$	—	—	—	—	
Barbados . . .	4417	869	4229	879	286	68	1 to near 15	1 to near 13	7 $\frac{1}{4}$	13 $\frac{1}{4}$	—	—	7 $\frac{2}{4}$	11 $\frac{2}{2}$	
Dominica . . .	675	354	643	360	41	13	1 to 15 $\frac{2}{3}$	—	10 $\frac{1}{5}$	—	—	—	—	—	
St. Vincent . . .	1163	—	1094	—	41	—	1 to 26 $\frac{2}{3}$	—	1 to near 18	—	—	—	—	—	
Antigua . . .	685	345	723	326	49	21	1 to 14 $\frac{3}{4}$	1 to 15 $\frac{1}{5}$	11 $\frac{1}{5}$	33 $\frac{1}{4}$	—	—	—	—	
Tobago . . .	370	35	363	33	13	2	1 to near 28	16 $\frac{1}{2}$	22 $\frac{2}{3}$	44 $\frac{1}{2}$	—	—	—	—	
Grenada . . .	729	59	730	46	44	7	1 to 16 $\frac{1}{2}$	6 $\frac{4}{7}$	11 $\frac{1}{2}$	15 $\frac{2}{7}$	—	—	—	—	
St. Kitts . . .	1029	—	953	—	42	—	1 to 22 $\frac{3}{4}$	—	1 to near 19	—	—	—	—	—	
St. Lucia . . .	686	167	620	158	41	11	1 to 15	14 $\frac{4}{7}$	10 $\frac{7}{8}$	50 $\frac{2}{11}$	—	—	—	—	
Trinidad . . .	989	681	937	658	70	33	1 to 13 $\frac{1}{5}$	1 to near 30	6 $\frac{2}{7}$	20 $\frac{2}{4}$	—	—	—	—	
Demerara, &c.	2152	3	2172	3	68	—	1 to near 32	none to 3	9 $\frac{3}{4}$	none to 6	—	—	—	—	
Surinam . . .	1968	—	1920	—	94	—	1 to 20 $\frac{1}{2}$	—	10 $\frac{1}{2}$	—	—	—	—	—	
St. Thomas . . .	987	—	971	—	84	—	1 to 11 $\frac{1}{2}$	—	4 $\frac{1}{3}$	—	—	—	—	—	
St. Croix . . .	1223	—	1180	—	78	—	1 to 15 $\frac{1}{8}$	—	6 $\frac{3}{3}$	—	—	—	—	—	
	24205	3621	23508	3501	1676	219	1 to 14	1 to near 16	7 $\frac{1}{4}$	1 to 22 $\frac{7}{8}$	—	—	—	—	

1810.

Gaudaloupe	4581	1661	3525	1509	756	71	1	to	$4\frac{2}{3}$	1	to	$21\frac{1}{7}$	1	to	$2\frac{1}{2}$	1	to	$19\frac{7}{8}$	—	—	—	—	
Martinique	4086	342	3601	334	658	29	1	—	$5\frac{1}{2}$	1	—	$11\frac{2}{3}$	1	—	$3\frac{1}{3}$	1	—	$12\frac{1}{4}$	—	—	—	—	
Barbados	3501	851	3392	773	220	65	1	—	$15\frac{1}{2}$	1	to	near 12	1	to	near 9	1	—	11	—	—	—	8	
Dominica	1550	166	1309	157	201	10	1	—	$6\frac{1}{2}$	1	to	$15\frac{7}{10}$	1	to	$2\frac{3}{4}$	1	—	$26\frac{7}{10}$	—	—	—	—	
St. Vincent	701	—	712	—	35	—	1	—	$20\frac{1}{3}$	1	—	—	1	—	$13\frac{1}{6}$	1	—	—	—	—	—	—	
Antigua	1161	363	1040	355	91	24	1	—	$11\frac{1}{2}$	1	to	near 15	1	—	$7\frac{1}{3}$	1	to	$15\frac{1}{2}$	—	—	—	—	
Tobago	461	20	438	22	16	—	1	—	$27\frac{3}{8}$	1	to	near 22	1	to	near 20	none to	65	—	—	—	—	—	
Grenada	825	67	810	64	23	3	1	—	$35\frac{5}{23}$	1	to	$21\frac{1}{3}$	1	—	$18\frac{1}{3}$	1	to	21	—	—	—	—	
St. Kitts and } St. Eustatius }	1110	—	1015	—	72	—	1	—	$14\frac{7}{72}$	1	—	—	1	to	near 9	—	—	—	—	—	—	—	
St. Lucia	682	90	542	107	161	3	1	—	$8\frac{1}{3}$	1	—	$35\frac{2}{3}$	1	—	2	1	to	$45\frac{1}{3}$	—	—	—	—	
Trinidad	1044	672	878	673	82	41	1	—	$10\frac{2}{3}$	1	—	$16\frac{1}{6}$	1	—	6	1	to	near 22	—	—	—	—	
Demerara, &c.	1068	—	1007	—	29	1	1	—	$38\frac{5}{16}$	1	—	—	—	—	$23\frac{2}{4}$	1	to	3	—	—	—	—	
Surinam	1180	—	1131	—	48	—	1	—	$23\frac{1}{16}$	1	—	—	—	—	$19\frac{1}{4}$	1	—	—	—	—	—	—	
St. Thomas	741	—	675	—	82	—	1	—	$8\frac{1}{4}$	1	—	—	—	—	$3\frac{1}{3}$	1	—	—	—	—	—	—	
St. Croix	1398	—	1317	—	99	—	1	—	$13\frac{1}{3}$	1	—	—	—	—	$5\frac{1}{6}$	1	—	—	—	—	—	—	
St. Martin	394	23	352	22	30	—	1	to	near 12	—	—	—	—	—	$6\frac{1}{7}$	1	—	—	—	—	—	—	
	24490	4255	21744	4016	2603	247	1	to	$8\frac{1}{3}$	247	1	to	$16\frac{1}{4}$	1	to	$4\frac{6}{7}$	1	to	near 19	—	—	—	—

1811.

	White	Black.	White.	Black.	White.	Black.	White.	Black.	White.	Black.	In General Hospital.		
											Gills.	Gills. s.	d.
Barbados . . .	3191	608	2974	587	271	50	1 to near 11	1 to 11 $\frac{3}{4}$	1 to near 7	1 to 17	1 $\frac{1}{4}$	7 $\frac{2}{4}$	9 $\frac{1}{2}$
Martinique . . .	2522	171	2347	166	262	15	1 to 9	1 to 11 $\frac{1}{5}$	1 to 6 $\frac{1}{3}$	1 to 16 $\frac{1}{7}$	—	—	—
Gaudaloupe . . .	2001	1651	1854	1507	281	132	1 to 6 $\frac{1}{2}$	1 to 11 $\frac{5}{12}$	1 to 4 $\frac{1}{5}$	1 to 11 $\frac{7}{8}$	—	—	—
Dominica . . .	788	241	755	243	74	8	1 to 10 $\frac{1}{5}$	1 to 30 $\frac{3}{8}$	1 to 5 $\frac{1}{10}$	1 to 30 $\frac{3}{4}$	—	—	—
St. Vincent . . .	616	—	605	—	16	—	1 to near 38	—	29	—	—	—	—
Antigua	1479	63	1392	85	54	6	1 to 25 $\frac{2}{3}$	1 to 14 $\frac{1}{9}$	1 to 18 $\frac{1}{2}$	1 to 23 $\frac{1}{6}$	—	—	—
Tobago	493	16	491	15	16	2	1 to 30 $\frac{1}{16}$	1 to 7 $\frac{1}{2}$	1 to 17 $\frac{1}{2}$	1 to 29	—	—	—
Grenada	725	69	739	68	9	3	1 to 82 $\frac{1}{9}$	1 to 22 $\frac{2}{3}$	1 to 51 $\frac{7}{8}$	1 to 21	—	—	—
St. Kitts, &c. . . .	1440	1	1357	1	99	—	1 to 13 $\frac{2}{3}$	none to 1	7 $\frac{7}{8}$	—	—	—	—
St. Lucia	388	109	347	98	26	9	1 to 13 $\frac{9}{26}$	1 to 10 $\frac{3}{9}$	11 $\frac{1}{6}$	1 to 18 $\frac{4}{6}$	—	—	—
Trinidad	1025	697	913	672	142	22	1 to 6 $\frac{1}{7}$	1 to 20 $\frac{6}{11}$	37 $\frac{8}{3}$	1 to 39 $\frac{1}{2}$	—	—	—
Demerara, &c. . . .	1339	4	1270	4	27	—	1 to 47 $\frac{5}{7}$	none to 4	25 $\frac{2}{3}$	none to 3	—	—	—
Surinam	1366	—	1307	—	70	—	1 to 18 $\frac{2}{3}$	—	14 $\frac{1}{7}$	—	—	—	—
St. Thomas	515	—	472	—	45	—	1 to 10 $\frac{1}{2}$	—	5	—	—	—	—
St. Croix	879	—	821	—	45	—	1 to 18 $\frac{1}{4}$	—	11 $\frac{2}{3}$	—	—	—	—
St. Martin	286	14	287	11	8	2	1 to 35 $\frac{7}{8}$	1 to 5 $\frac{1}{2}$	21 $\frac{1}{4}$	1 to 48 $\frac{1}{2}$	—	—	—
	19053	3644	17931	3457	1445	249	1 to 12 $\frac{1}{3}$	1 to near 14	8	1 to 17 $\frac{1}{5}$	—	—	—

1812.

Barbados . . .	4091	638	3849	579	121	47	1 to	31 $\frac{3}{4}$	1 to	12 $\frac{1}{3}$	1	16 $\frac{1}{2}$	1	17 $\frac{1}{3}$	1	6 $\frac{3}{4}$	2
Martinique . .	2269	205	2150	200	118	5	—	18 $\frac{1}{4}$	1	40	1	15	1	78 $\frac{2}{5}$	1	—	—
Gaudaloupe . .	2808	1397	2592	1311	169	78	—	15 $\frac{1}{2}$	1	167 $\frac{8}{8}$	1	9 $\frac{7}{8}$	1	17 $\frac{1}{4}$	1	—	—
Dominica . . .	1138	189	1146	177	56	7	—	20 $\frac{1}{2}$	1	29 $\frac{7}{7}$	1	9 $\frac{1}{3}$	1	33 $\frac{1}{7}$	1	—	—
St. Vincent . .	679	—	654	—	20	—	—	32 $\frac{7}{10}$	1	—	—	25 $\frac{1}{3}$	1	—	—	—	—
Antigua	1167	—	1179	—	20	—	—	58 $\frac{3}{4}$	1	—	—	44 $\frac{1}{2}$	1	—	—	—	—
Tobago	550	7	504	4	25	1	—	20 $\frac{4}{25}$	1	4	1	11 $\frac{1}{3}$	1	62	1	—	—
Grenada	548	4	423	3	20	1	—	21 $\frac{3}{20}$	1	3	1	24 $\frac{3}{4}$	1	64	1	—	—
St. Kitts, &c.	1250	32	1134	20	140	7	—	8 $\frac{1}{10}$	1	1 to near 3	1	5 $\frac{2}{3}$	1	9 $\frac{6}{7}$	1	—	—
St. Lucia . . .	497	163	466	157	28	8	—	16 $\frac{9}{14}$	1	19 $\frac{5}{8}$	1	11 $\frac{1}{2}$	1	26 $\frac{1}{2}$	1	—	—
Trinidad	1070	630	994	622	71	30	—	14	1	20 $\frac{2}{3}$	1	8 $\frac{1}{2}$	1	26 $\frac{1}{3}$	1	—	—
Demerara, &c.	1948	5	1819	4	72	—	—	25 $\frac{1}{2}$	1	—	—	9 $\frac{1}{2}$	1	none to 3	—	—	—
Surinam	1538	—	1465	—	48	—	—	30 $\frac{1}{2}$	1	—	—	1 to near 18	1 to near 18	—	—	—	—
St. Thomas . .	466	—	423	—	25	—	—	1 to near 17	1 to near 17	—	—	6 $\frac{1}{2}$	1	—	—	—	—
St. Croix . . .	949	—	881	—	49	—	—	18	1	—	—	9 $\frac{5}{7}$	1	—	—	—	—
St. Martin . . .	358	12	340	11	13	2	—	26 $\frac{2}{13}$	1	5 $\frac{1}{2}$	1	13 $\frac{1}{2}$	1	39	1	—	—
	21326	3182	18019	3088	995	186	1 to	18 $\frac{1}{9}$	1	16 $\frac{2}{3}$	1	12 $\frac{1}{10}$	1	1 to near 22	1	—	—

1813.

	White.	Black.	White.	Black.	White.	Black.	White.	Black.	White.	Black.	White.	Black.	In General Hospital.			Black.
													Gills.	Gills.	s. d.	
Barbados . . .	3632	1321	3592	1148	93	78	1 to 38 $\frac{1}{2}$	1 to 14 $\frac{2}{3}$	1 to near 21	1 to 13	$\frac{3}{8}$	$\frac{1}{8}$	2	2		
Martinique . . .	3071	604	2375	555	109	21	23 $\frac{2}{3}$	25 $\frac{1}{2}$	1 to 15 $\frac{2}{3}$	1 to 30 $\frac{1}{4}$	—	—	—	—		
Gaudaloupe . . .	2679	1507	2644	1466	165	80	25 $\frac{1}{6}$	18 $\frac{1}{3}$	1 to 14 $\frac{1}{5}$	1 to 22 $\frac{1}{5}$	—	—	—	—		
Dominica . . .	1458	119	1236	93	146	14	13 $\frac{1}{4}$	7	1 to 4 $\frac{1}{2}$	1 to 15	—	—	—	—		
St. Vincent . . .	582	—	569	—	14	—	40 $\frac{2}{3}$	—	1 to 28 $\frac{1}{3}$	—	—	—	—	—		
Antigua . . .	1191	—	1170	—	20	—	58 $\frac{1}{2}$	—	1 to 48 $\frac{1}{3}$	—	—	—	—	—		
Tobago . . .	253	57	274	51	6	3	4 $\frac{2}{3}$	—	1 to 30	1 to 25	—	—	—	—		
Grenada . . .	489	1	452	1	22	—	20 $\frac{1}{2}$	17	1 to 24 $\frac{1}{2}$	—	—	—	—	—		
St. Kitts, &c. . .	744	6	731	8	25	3	31 $\frac{1}{5}$	2 $\frac{2}{3}$	1 to 26 $\frac{2}{5}$	1 to 25	—	—	—	—		
St. Lucia . . .	632	24 $\frac{1}{2}$	584	226	36	10	16 $\frac{1}{4}$	22 $\frac{1}{2}$	1 to 9 $\frac{1}{3}$	1 to 21 $\frac{1}{5}$	—	—	—	—		
Trinidad . . .	1175	70 $\frac{3}{4}$	1082	655	83	37	13	18	1 to 8 $\frac{1}{4}$	1 to 23 $\frac{1}{3}$	—	—	—	—		
Demerara, &c. . .	2018	7	1985	9	34	1	58 $\frac{1}{3}$	9	1 to 24	1 to 10	—	—	—	—		
Surinam . . .	1200	—	1143	—	43	—	26 $\frac{1}{2}$	—	1 to 17 $\frac{1}{4}$	—	—	—	—	—		
St. Thomas . . .	559	—	540	—	18	—	30	—	1 to near 10 $\frac{1}{2}$	—	—	—	—	—		
St. Croix . . .	795	2	758	2	54	—	14	2	1 to 9 $\frac{1}{6}$	—	—	—	—	—		
St. Martin . . .	263	38	255	31	12	6	21 $\frac{1}{4}$	5 $\frac{1}{6}$	1 to 15 $\frac{1}{3}$	1 to 10 $\frac{1}{6}$	—	—	—	—		
	20741	4607	19584	4245	820	253	1 to 23 $\frac{7}{8}$	1 to 16 $\frac{1}{3}$	1 to 14 $\frac{2}{3}$	1 to 19 $\frac{1}{2}$	—	—	—	—		

1814.

Barbados . . .	2839	1076	2735	1190	74	44	1	to	37	1	to	27	1	to	24	1	to	22 $\frac{2}{3}$	1	to	2	5 $\frac{3}{4}$
Martinique . .	2221	564	1931	552	166	15	1	—	11 $\frac{2}{3}$	1	—	1 to near 35	1	—	10 $\frac{1}{3}$	1	—	38 $\frac{1}{3}$	1	—	—	—
Gaudaloupe .	1256	1026	1233	937	73	90	1	to	near 17	1	to	10 $\frac{1}{3}$	1	to	near 19	1	to	18 $\frac{8}{11}$	1	to	—	—
Dominica . . .	667	134	611	119	53	11	1	to	11 $\frac{1}{2}$	1	to	10 $\frac{9}{11}$	1	—	8 $\frac{1}{17}$	1	—	1	1	—	—	—
St. Vincent . .	746	2	690	1	32	1	1	—	21 $\frac{1}{2}$	1	—	1	1	—	17 $\frac{1}{3}$	1	—	1	1	—	—	—
Antigua	989	125	1009	79	20	8	1	—	50 $\frac{1}{2}$	1	—	9 $\frac{7}{8}$	1	—	46	1	—	33 $\frac{7}{8}$	1	—	—	—
Tobago	378	88	339	95	11	1	1	—	30 $\frac{9}{11}$	1	—	95	1	—	19 $\frac{1}{3}$	1	—	83	1	—	—	—
Grenada	834	—	786	—	28	—	1	—	28 $\frac{1}{14}$	1	—	—	1	—	21 $\frac{1}{7}$	1	—	—	1	—	—	—
St. Kitts, &c.	894	—	865	—	27	—	1	—	32	1	—	—	1	—	25 $\frac{1}{6}$	1	—	—	1	—	—	—
St. Lucia . . .	312	186	289	180	11	5	1	—	26 $\frac{3}{11}$	1	—	36	1	—	23 $\frac{9}{11}$	1	—	35 $\frac{4}{5}$	1	—	—	—
Trinidad . . .	1105	542	1019	511	79	22	1	to	near 13	1	—	23 $\frac{1}{4}$	1	—	10 $\frac{1}{5}$	1	—	37 $\frac{1}{2}$	1	—	—	—
Demerara, &c.	2104	4	2089	2	36	4	1	to	58	4	—	2	4	—	23 $\frac{1}{2}$	1	—	3 $\frac{3}{4}$	1	—	—	—
Surinam	961	—	983	—	25	—	1	—	39 $\frac{1}{3}$	1	—	—	1	—	29 $\frac{1}{5}$	1	—	—	1	—	—	—
St. Thomas . .	377	—	377	—	19	—	1	to	near 20	1	—	—	1	—	10 $\frac{2}{3}$	1	—	—	1	—	—	—
St. Croix . . .	706	—	686	—	21	—	1	to	32 $\frac{2}{3}$	1	—	—	1	—	28 $\frac{1}{3}$	1	—	—	1	—	—	—
St. Martin . . .	228	35	213	35	9	1	1	—	22 $\frac{5}{9}$	1	—	35	1	—	24 $\frac{1}{3}$	1	—	55	1	—	—	—
	16617	3782	15855	3701	684	202	1	to	23 $\frac{1}{3}$	1	—	18 $\frac{1}{3}$	1	to	16 $\frac{2}{3}$	1	to	23 $\frac{1}{10}$	1	to	—	—

The principal object of the Society, in recording the above returns, was to ascertain the advantage from the different modes of treating fever in tropical climates. The comparative mortality among the Blacks can, in this respect, give but little information; nor, indeed, can a fair estimate be formed without a more accurate knowledge of the age and condition of the subjects.

The white troops, on the contrary, are chiefly affected with tropical diseases, the consequence of change of climate; are, for the most part, adolescent; and, generally speaking, in a state fit for active service and a long voyage.

In taking the average of any three previous successive years, in the mortality of the white troops, and comparing it with that of 1812, 1813, and 1814, the advantage of Dr. Jackson's plan will be sufficiently apparent; and though a matter of minor consequence, compared with health, yet certainly an important secondary consideration, the expense of the diet is not less striking.

ART. XXII.

A CASE OF LARGE HEPATIC ABSCESS.

By J. ANDREE, Esq. Surgeon.

Read, September 25, 1815.

MAY 7, 1815, I was called to attend on Mr. D. aged forty-seven, for a pain at the scrobiculus cordis, accompanied with loss of appetite and occasional vomiting.

On examination, I perceived considerable induration extending from the *scrobiculus cordis* to the *umbilicus*, and occupying the whole of the abdomen, from thence to the margin of the ribs on the right side. My opinion was, that it was an enlargement and disease of the liver. I ordered him *Pil. hydrargyri*, *gr. v.* at night, and *gr. iii.* in the morning. After a few days, the induration was more distinctly to be felt below the xiphoid cartilage.

I then advised to increase the pill to *gr. v.* or *vi.* night and morning, and to apply a mercurial plaster to the part.

Under this treatment, the pain was diminished, and his general health rather improved. He now went into the country, (the 13th,) where he staid about six days; and, on his return, by examining the induration, I could distinctly feel a pulpiness in the indurated part, about an inch below the xiphoid cartilage.

May 21st. In consultation with Mr. Astley Cooper, our opinion was, that matter was forming in the liver; the part was ordered to be fomented with decoction of camomile flowers, and poulticed, and to be rubbed with *lin. ammoniæ* previous to the application of the poultice.

25th. The suppuration had advanced; apply *emp. galbani*, and omit the poultices, which are inconvenient, and give pain from their weight.

31st. Four in the morning, saw the patient with Mr. Astley Cooper, who made a puncture at the *linea alba*, about three-fourths of an inch below the xiphoid cartilage, with a bleeding lancet; and let out one quart and four ounces,

by measure, of brown matter, having a peculiar and somewhat fœtid odour. From this operation, he felt much relieved; about four ounces of matter were discharged from the punctured part, during the day and night.

June 1st. Relieved of pain, but the stomach will not admit of any solids whatever.

Until the 6th, he continued to decline, and died at eleven, on the morning of the 7th.

8th. Opened the body.

The emaciation was extreme.

Adhesion had taken place between the liver, and peritonæum round the puncture, but at no other part.

The puncture had entered the liver, which was filled with matter, (about a quart); it was enlarged greatly, extending below the umbilicus. Its external surface shewed no sign of disease, except the enlargement.

The gall-bladder was large, and fully distended with bile, of an ordinary colour, and contained an irregularly-shaped calculus, of the size of a small hazel nut.

The stomach was very much distended with air, and, in a manner, divided into two parts, by a strong ligamentous band, extending from the margin of the liver to what seemed to be

part of the mesentery, being firmly attached to each; and, at the latter, there was some appearance of matter: the finger being passed into the liver, proved, that, at this part, its parietes were very thin.

At each inguen, the finger passed with facility under Poupart's ligament into the thigh.

During the continuance of the disease, the patient suffered great pain at the stomach; for relief of which he took tincture of opium, about sixty drops every eight hours, sometimes every six hours.

It is remarkable, that he never had a bilious symptom during the whole course of the disease; also, that the stomach could not retain any solid whatever, shewing that it acts as a whole; since the effect of the ligamentous band pressing on it, left the larger half, ending at the duodenum, free from pressure.

ART. XXIII.

MEMOIRS OF THE LIFE OF JAMES JOHNSTONE, M.D.

M. D. S. Lond. S. R. M. Ed. Physician to the General Infirmary of Worcester, Member of the Philosophical and Literary Society of Manchester, and of the Philosophical Society of Bath.

By the late J. C. LETTSOM, M.D.

THE subject of the present memoirs was the fourth son of John Johnstone, Esq. of Galabank, an ancient branch of the Johnstones, of Johnstone; he was born at Annan, in Scotland, April 14, 1730, in which town he received the rudiments of his education, under the Rev. Dr. Henry, afterwards celebrated for his History of England. He continued at Annan or at Moffatt, assisted, in his studies, by his brother, the Rev. Edward Johnstone, heir of Moffatt, till he had completed his sixteenth year, at which period his progress, in classical learning, was such, as to induce his friends

to remove him to the University of Edinburgh. He very early determined on medicine as the profession of his future life, and pursued the study of it, for the space of three years, under the auspices of Monro, St. Clair, Rutherford, and Plummer; spending his vacations with his brother, the minister of Moffatt, and receiving, from this pious source, the most valuable instruction.

As he was thought, at this time, too young for practice, the fourth year of his professional studies was devoted to foreign travel. He went to Paris, where he perfected himself in anatomy, under Ferriere, and, in chemistry, under Rouelle.

In June, 1750, he received the degree of doctor in medicine, in the University of Edinburgh, publishing for his thesis, "*De Aeris factitii imperio in primis corporis humani viis.*"

In this dissertation, he availed himself largely of the experiments of Hales and Boyle; and it is no trifling praise to a young man of twenty years of age, that Dr. Priestly should say, of his dissertation, that, for the time, it contained a great deal of important information.

In 1751, Dr. Johnstone settled, as a physician, at Kidderminster, a thriving manufac-

turing town in Worcestershire, where he experienced the kind offices of Dr. M'Kenzie, who had retired from practice, as appears by a letter from Dr. St. Clair, dated November, 1751. In this letter, the doctor says, "As
" to yourself, allow me to repeat, in a few
" words, to you, the sum of my former ad-
" vice,—be honest, be prudent, be diligent,
" and complaisant. Thus you will not fail
" of success, which I wish you most heartily."

His worthy friend's wishes were soon realized; for, in the first year of his practice, though only twenty-one years of age, he acquired one hundred pounds, and never afterwards had occasion to apply to his father for pecuniary assistance. It was here, that the cases of gall stones came under his care; the history of which was inscribed in the *Philosophical Transactions*, l. xxi. p. 543, under the title of "Two extraordinary Cases of Gall Stones."

From the low situation and crowded population of Kidderminster, malignant fevers and sore throats had often been prevalent and fatal; a circumstance which arrested the attention of this reflecting physician, and the result was the introduction of the use of mineral acids, Peruvian bark, and a tonic system in lieu of

bleeding, and every other debilitating means. It was probably, the success attending the internal exhibition of mineral acids, which first suggested to him the idea of raising them in the form of vapour, as a means of destroying contagion. This he did, by pouring the sulphuric acid on common salt; of which he published an account, 1758, in a book intituled "An historical dissertation, concerning the malignant epidemic Fever of 1756;" a period many years prior to the pretended discovery, by Guyton Morveau, of the muriatic acid gas, for purifying the cathedral at Dijon, which was not till 1773; and twenty-two years antecedent to that of Dr. James Carmichael Smyth's introduction of the nitric acid vapour, for the same purpose; the account of which was not published till 1795.

However highly this undoubted discovery of the use of mineral acids, both internally and in the form of a vapour, in curing or preventing malignant fevers, might have raised the character of Dr. Johnstone, it received additional lustre from his other important publications, equally evincing the strong powers of an inquisitive and luminous mind.

In the fifty-fourth volume of the Philosophi-

cal Transactions, he published the first sketch of his opinions of the uses of the ganglions of the nerves,—a subject, which he afterwards pursued in the fifty-seventh and sixtieth volumes of the same work. The publication of these papers procured the author the notice and friendship of many distinguished persons at this period; and, amongst others, of the illustrious Haller, with whom a correspondence commenced in 1761, and continued till 1775. It consists chiefly of physiological and critical observations on the doctrine of ganglions, in which Haller candidly offers objection, and admits of reply. In a letter, dated May 25, 1769, after some prefatory observations on Dr. Johnstone's doctrine, he adds, "For any thing I know, there is but one objection, (the ophthalmic ganglion,) which lies entirely between nerves dedicated to voluntary motion. I shall look for some opportunity of shewing you my just regard," &c. This objection is satisfactorily answered in a subsequent work of our author, intituled, "Medical Essays and Observations." These papers were collected and enlarged, and published, at Salop, in 1771, under the title of "Essays on the Ganglions of the Nerves."

They were again published in 1795, with many valuable physiological and pathological additions, and with several other practical tracts, in one volume, intituled “*Medical Essays and Observations, with Disquisitions relating to the Nervous System.*” This volume, which was translated into the German and French languages, contains all the medical tracts, published by our associate, excepting his Inaugural Dissertation; his treatise on the fever of 1756; the life of Dr. Gregory, in the Manchester memoirs; and two papers in the the Memoirs of the Medical Society of London, on the angina and scarlet fever of 1778, and on the diseases of needle-makers. He published, however, separately, on the Slave-Trade; and an analysis of Walton Water, near Tookesbury, which he proved to be of nearly the same qualities as the purging waters of Cheltenham. At the end of this analysis, he again displayed the strong and active powers of his mind, by assigning the uses of the lymphatic glands.

At Kidderminster, Dr. Johnstone continued to act in a wide sphere of country practice, till the death of his eldest son, a physician fast rising into eminence, who fell a martyr to

humanity, while attending the prisoners affected with gaol fever at Worcester. This distressing event, together with the coincidence of the death of his dearest friend, the Rev. Job Ortons, induced him to remove to Worcester. In this city, famous for its physicians from the days of Dr. Cole, the friend of Sydenham, he continued, vigorous, active, and sprightly; useful to the community, beloved by his friends, and practising, with the same success, till within a few days of his death.

In the beginning of April, 1802, Dr. Johnstone was summoned to Birmingham, on a commission of lunacy. From thence he was hurried about the county, in the course of three days nearly two hundred miles. From this extraordinary exertion he never recovered. His breathing became shorter, and his strength failed. He had been attacked with pulmonary complaints in his youth, from which the temperance and caution of the middle part of his life had exempted him. In his latter years they recurred, and, during the spring of 1801, he had caused himself to be bled rather profusely. In the last attack of his malady, he had recourse again to bleeding, but his weakness was such as to forbid a repetition of it. Only

five days before his death, he went to Bransgrove, a distance of thirteen miles, on professional business. He now saw his end approaching, and prepared for it with the same firmness as if he were about to undertake a long journey. The night before he died, he sat up and conversed cheerfully with his family. His intellect was clear; his mind calm; and he expired, after a short, and in no wise, painful struggle, on the evening of April 28, 1802, in the seventy-third year of his age.

Dr. Johnstone enriched the Memoirs of our Society, of which he was a Corresponding Member, by the following valuable communications: In vol. I:—

A case of hydrophobia, which was enlarged, with further observations, in his *Medical Essays and Observations*, published in 1795. To this case, many practical remarks were added, by himself and his son Dr. Edward Johnstone, in which a conclusion very favourable to the mercurial ointment was suggested.

Case of angina pectoris, from an unexpected disease of the heart, 1786.

Vol. II.—Of the cynanche pharyngea, or defect of deglutition, from a straitening of the œsophagus. 1787.

Vol. III.—Remarks on the angina and scarlatina of 1778.

Case of calculi passing through the bladder into the rectum, 1790.

A case of ulcer of the bladder communicating with the rectum, 1790.

Case of a rupture of the bladder opening into the pelvis, 1790.

Vol. IV.—On the phthisis pulmonalis of needle-manufacturers, 1790.

Under a sense of the importance of these communications, the Council of the Society voted the author their Honorary Medal.

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Society, of London.*

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